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THE NEW Outlook FOR THE BLIND

January 1971 Volume 65 Number 1

The Importance of Employing Blind
Teachers in the Public Schools
Ewald B. Nyquist

Cane Travel in Winter
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Articles

- 1 The Importance of Employing Blind Teachers in
the Public Schools
Ewald B. Nyquist
- 8 Cane Travel in Winter
S. W. Rudkin, M.Ed.
- 12 Junior High Readiness and the Blind Child
Edith Largy Kapela
- 18 Providing Ophthalmological and Optometric Diagnostic
Examinations and Optical Aids for Legally Blind Aged
Persons Under Medicare
George O. Hellinger, O.D.
- 21 The Geographically Deprived
William M. Winkley
- 25 Coordination of Casework—Rehabilitation Teaching Services
Mildred F. Stern, A.C.S.W.

Departments

- 33 Editorial Notes
- 33 Letters to the Editor
- 35 Answers to Accreditation Questions
- 36 Current Literature
Mary Maie Richardson
- 37 News in Brief

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The Importance of Employing Blind Teachers in the Public Schools

Someone has remarked that if good classroom discipline depended upon the teacher's 20/20 vision, we would have remarkably effective education in this country. In that event, reputable ophthalmologists and optometrists could do for administrators what is now so difficult. They could furnish brief reports through which the most effective disciplinarians could be employed by the highest bidder. School systems with high salaries, new buildings, and geographic attractions would undoubtedly lure most of the candidates with 20/20 vision, while those further down on the scale might have to be content with slightly less orderly classrooms.

□ Anyone who has ever employed teachers has at some time wished that there were such simple ways of evaluating a candidate's ability to create a productive classroom atmosphere and to fulfill the objectives of our educational programs. Delineation of educational goals and of desired teacher competencies is difficult enough, but the decision regarding a candidate's ability to fit into that picture is even more difficult.

In this era of general teacher surplus and a crisis of confidence in the public schools, there are not only the traditional problems of interviewing and selecting prospective teachers but also the challenge of recruiting imaginatively. The need for competent staff has led state and local school administrators to recruit from hitherto untapped groups in the population and to offer training which will increase or update teaching skills. While recruiting methods vary from state to state, the intent is the same—the attraction of qualified people into the schools. In 1967, for example, the New York State Education Department established a Teachers Reserve to recruit and to train or retrain prospective teachers interested in entering or re-entering the teaching profession. Several universities have designed refresher courses for mid-career women who had interrupted their teaching careers because of family responsibilities. Peace Corps returnees have also been assisted in securing placement by the Teachers Reserve office.

We are especially anxious to recruit teachers who can and want to teach in the inner cities and have created a New York State Urban Teachers Corps

This article is derived from the keynote address delivered by Commissioner Nyquist on March 18, 1969, at a Regional Training Institute for the Employment of Qualified Blind Teachers held in New York City by the New York Association for the Blind and the Rehabilitation Services Administration, Social and Rehabilitation Service, Region II, U.S. Department of Health, Education and Welfare. The proceedings of the Institute, which includes the results of the NYAB survey mentioned by Commissioner Nyquist, are available from the New York Association for the Blind, 111 East 59th Street, New York, N.Y. 10022.

EWALD B. NYQUIST

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Evaluating Teacher Candidates

Recruiting imaginatively

New York State Urban Teachers Corps

for that purpose. Similar efforts to attract candidates are being made by the state education agencies in Pennsylvania, Delaware, and New Jersey.

Of course, mid-career women and Peace Corps returnees are not the only groups in our population which offer teaching potential. Advantage should also be taken of the desire of qualified visually handicapped candidates to teach in our public schools. This includes those whose vision places them within the "legal" definition of blindness (20/200 or less in the better eye after correction). Although such a measurement is only of distance vision and not of the more important ability to see at close range, it is the definition which is used to determine eligibility for certain benefits and, too often, ineligibility for certain activities.

It must be remembered, too, that it is the nature of visual loss, the age at which the visual loss occurred, and a constellation of personal characteristics that will determine the functional behavior of each visually handicapped person. Perhaps even more important are those clues which, in the evaluation of a candidate, indicate the extent to which the individual can anticipate classroom activities which require more vision than he possesses and the extent to which he can visualize alternative activities utilizing his own personal strengths.

□ Each administrator has to arrive at a thoughtful decision regarding any candidate's ability to succeed in a specific teaching assignment. Will a mid-career woman, a new graduate, an experienced teacher, a Peace Corps returnee, be able to carry out a teaching assignment? Will a visually handicapped person be able to fulfill the teaching assignment? No objective test can measure teaching competence. Whether we stop to think about it or not, the hiring of every teacher is very much an act of faith and hope: faith in one's own judgment and in the candidate's expressed desire to be a good teacher; hope that the decision was right and that the teacher will do good teaching and participate in making the climate of the school conducive to learning.

Some may say that too often the hiring of teachers is an act of desperation. In some specific subject matter areas, the teacher shortage may necessitate employment of candidates who are less qualified. This inevitably leads to a cruelty that is not intended—that of allowing a teacher to assume a post in which there are high odds that he will fail. He goes into the assignment without our confidence and support, which is in itself a push toward failure. In the best interest of the school and certainly in the best interest of blind candidates who may be interviewed and employed, let us do the thinking and planning which will make an employment decision one of hope and faith—one in which the blind teacher has our confidence and support.

It must be kept in mind that blindness is neither a qualification nor a disqualification. In other words, blindness in itself does not predispose any person to unique teaching qualities, abilities, or talents, nor does it qualify him for a position just because we may have extreme feelings of pity or concern. Blindness, also, does not automatically qualify a teacher to teach blind

Visually handicapped teachers

Hiring Is an Act of Faith and Hope

Confidence and support for new teachers

Teaching and blindness

children. On the other hand, blindness does not in itself automatically disqualify any person who has the requisite preparation and personal skills.

□ If decisions about employment of blind candidates are to be based upon their competencies, can it be assumed that teacher preparation programs are open to blind college students? While there is a history of reluctance to accept legally blind students into teacher preparation programs and those who were accepted were warned that the university placement bureau could not take responsibility for placement, there is a growing rate of acceptance. There are now more than 300 blind teachers employed in elementary and secondary schools in this country; during the 1968-69 academic year there were more than 700 blind college students preparing for teaching careers in the public schools. It is, therefore, increasingly possible for blind students to acquire the academic qualifications that local schools and state certification agencies deem essential.

In 1967, the legislature of the State of New York amended the Education Law so that "no regulations established by the commissioner or by any school district . . . shall prohibit, prevent or disqualify any person who is otherwise qualified, from competing, participating and registering for examination nor from obtaining a teacher's certificate or from qualifying for a position as a teacher solely by reason of his or her blindness. . . ."

Because colleges have had difficulty in finding practice teaching placements for blind students, many otherwise qualified students fail to achieve certification. This situation, however, could be turned to great advantage, for it offers local schools that are near schools of education the opportunity to work with qualified blind teachers-in-training whose activities can be supervised by the university. The potential for a relatively stress-free experience for the blind practice teachers and for the students, supervisors, teachers, parents, and administrators could make this situation a prelude to a full-time association—a position in the local school for the blind teacher once he has achieved certification.

□ If blindness is neither a qualification nor a disqualification and if a candidate has academic qualifications as certified by his state education agency, what, then, are the personal competencies which are sought in such teachers? It is my conviction that the same scale of measurement of personal skill and competency should be applied to all teacher-candidates, whether they be sighted or blind or otherwise handicapped. Each school system has its own criteria for selecting teachers but there are some general competencies upon which all could agree.

First, does the teacher have a sincere interest in enabling children to learn and to grow toward competent adulthood? This implies that good teachers are adults who, without sentimentality, want to engage in a career which stimulates children to learn and to understand and to do, who, in short, are interested in children—all children. Further, teachers should have the kind of maturity that permits them to measure their own achievement in terms of long-range goals and objectives rather than the specific successes or mistakes of individual children.

Teacher Preparation Programs

New York has amended Education Law

Practice teaching

Qualities of a Good Teacher

1. Interest in children

Second, does the teacher show promise of flexibility and creativity in using both new and traditional ideas, techniques, and materials in the classroom? A teacher must be able to evaluate a teaching or a learning problem and to draw upon a wide range of ideas that may offer a solution. Teachers must not be bound either to the "time-honored" or to the "brave-new." They must be seeking to resolve problems, not looking for ready-made answers. They must not, however, be afraid of innovation, which I define as a planned disruptive experience that makes a productive difference.

Third, is the teacher able to work with other teachers and staff in constructive joint efforts to achieve the educational goals of the school?

Fourth, does the teacher have the professional confidence and personal security to enable him to meet with parents to interpret the program of his classroom?

It is clear, I think, that not one of these four points, points which are so basic in the consideration of teacher candidates, has anything to do with how much or how little an individual can see. If, then, blind students can go to the same teacher-preparation programs in the university as their sighted peers and achieve the same state certification, and if impaired vision has no effect upon the crucial personal characteristics sought in teachers, what other factors have, up to now, prevented the hiring of blind teachers?

□ The initial hurdle to be overcome is simply the feeling of uneasiness which sighted school personnel experience in the first interviews and in the first few weeks of school. This uneasiness is most often related to the understandable uncertainties of dealing with a blind person. Blind people have their own ways of relating to these problems and only time and frank discussion will erase the uncertainty of the first few contacts. In reality, the process of getting acquainted is pretty much the same for all of us.

As a part of his doctoral work, Edward Huntington, superintendent of schools in Canton, New York, investigated the problems that the administrators of schools believed would cause difficulty for blind teachers. Through interviews with personnel in schools in which blind teachers were working, he was able to determine which problems had actually been encountered and the solutions that had been worked out. In very brief summary, it was found that, in most schools, lunchroom supervision was not assigned to the blind teacher but other appropriate duties were substituted. Student cheating on tests was not a problem. Blind teachers had no difficulty during fire drills or in chaperoning and advising student activities and clubs. Keeping written records did not prove to be a problem, there being a number of different methods devised by the blind teachers. Effective discipline, the area of greatest concern, proved to be directly related to the elusive quality of respect which the students accorded to the teacher. Blindness was not felt to be a factor in discipline and only five of the 32 teachers in this study were judged by their principals to have less than average discipline in their classrooms. Finally, many principals reported that after the first few weeks the students tended to forget about the teacher's lack of vision.

The New York State Federation of Workers for the Blind has gone on

2. *Flexibility and creativity*

3. *Cooperative spirit*

4. *Professionalism*

Factors Preventing the Hiring of Blind Teachers

Imagined difficulties

Special privileges?

record with positive statements about two of the questions which school administrators may be reluctant to ask: is it necessary to give specific privileges to blind teachers that may not be enjoyed by other teachers?

A blind teacher will not expect, nor should he expect, any special consideration from his administrators. . . . A blind teacher, like his sighted colleagues, is expected to contribute, produce and compete. He is aware that he cannot expect to succeed in this profession unless he enters the job sufficiently equipped and motivated to do so.

And, will the blind person be able to get around the building and school grounds?

Getting around

Only those persons who have acquired a high level of personal adjustment should be considered for teaching assignments. Inasmuch as mobility is an essential aspect of personal adjustment for a blind person, all visually handicapped persons applying for teaching positions should be capable, independent travelers. . . . The blind teacher will orient himself to the building and grounds prior to assuming his classroom responsibilities. This means he will spend his own time learning routes to classrooms, the office, the gym, the cafeteria, the rest rooms, etc.

□ When blind students first knocked on the doors of teacher preparation programs in colleges and universities, it was mistakenly assumed that their intent was to teach only blind children, that blindness somehow qualified a person to teach others who are blind. The next step in our progress toward employment of blind teachers was a conviction that they would be successful only at the secondary level where students are more self-directed and where movement in the classroom is somewhat limited. Recently, the New York Association for the Blind compiled a list of teaching positions held by legally blind teachers in the public school systems in the United States in the 1968-69 academic year. This list is dramatic proof that another giant step has been taken in the march toward equality of opportunity. There are blind teachers in all grades, kindergarten through twelfth grade; there are administrators, curriculum coordinators, counselors. There are mathematics, music, language, English, business, social studies, social science, and remedial reading teachers. There are ten science teachers, including two who teach chemistry and two who teach physics. The old fears of school administrators are apparently beginning to disappear. Blind teachers are asking for and receiving opportunities to teach in the areas of their greatest skills and interests.

Progress in the Employment of Blind Teachers

It is, therefore, clear that our focus must be on the characteristics of good teaching and of good teachers, not on whether a person is sighted or blind. Good teaching by competent, informed, and enthusiastic teachers is the key to effective education. For while it takes many things to provide quality in education, the teacher is well ahead of whatever is in second place.

Quality of teaching should be emphasized

□ And what is good teaching? If education is the fulfillment of ourselves, then good teaching is that instruction which relentlessly demands the utmost of each student according to his abilities. As Emerson said, "What all

What Is Good Teaching?

of us need is someone to make us do what we are capable of doing." To lead a student with delight to understand that he is a human being worthy of study and celebration; to liberate closed minds from preconceptions, inhibitions, and timidities; teaching that reminds us that man was made a little lower than the angels; teaching that enables each young person to answer these questions: Who am I? Where have I come from? What is the meaning of life? What can I do to become and remain an effective, responsible member of society? To create in each child a positive self-image and the capacity for self-criticism—these are the goals of competent teaching.

Prevalence and Causes of Blindness in Urban and Rural Areas of Egypt

The following article is taken from a report by Mohyi-Eldin Said, D.O.M.S., Hyman Goldstein, Ph.D., Ahmad Korra, M.Ch., and Kahlil El-Kashlan, Dr. P. H., which appeared in Public Health Reports 85 (July 1970):587-99. The report is based on data from the Blindness Register Demonstration Project in Egypt supported by Agreement No. 522518, National Institutes of Health Special Foreign Currency Program. Tearsheets of the complete report are available from Dr. Hyman Goldstein, Division of Maternal and Child Health, University of California, Berkeley, California 94720.

From the "Discussion" (pp. 596-97). "Blindness is and, apparently always has been, a problem in Egypt. Despite this fact, meaningful statistics on prevalence rates by age, sex, and cause, based on community surveys, have been lacking to date. Before our study the two major sources of data on blindness in Egypt were the census and studies of ophthalmic patients. In the census statistics, the lack of definition, verifiable data, and cause of blindness were serious drawbacks to acceptance of these data. In the studies of ophthalmic patients, the lack of defined population from which patients were drawn make it impossible to determine representativeness of the data or to compute rates.

□ "This study, the first of its kind in the world, avoided the aforementioned deficiencies. Persons were examined in their homes using portable equipment, thus minimizing the possibility of missing the old and bedridden, who are likely to have the highest rates of vision disorders. These two groups are usually underrepresented among persons examined at clinics and hospitals."

From the "Summary" (p. 598). "A house-to-house survey of a four percent random sample of households in urban and rural areas in and around Alexan-

Lack of meaningful statistics

The Present Study

dria, Egypt, was conducted. This sample consisted of approximately, 11,000 persons of all ages and socio-economic levels. Attempts were made to examine all members of such households for visual acuity with best correction and, where appropriate, for field of vision. A total of 326 persons had diagnoses of blindness confirmed by an ophthalmologist."

From the "Discussion" (pp. 597-98). "The data would seem to indicate that blindness prevalence rates among females are not much higher than rates for males in urban areas but are significantly higher in rural areas, probably because of the increased keratitis and cataract prevalence among females in such areas. . . . Although rates for cataract were higher among both males and females in rural areas than they were in urban areas, the rate among the rural females was considerably higher than the rate for rural males. . . . For both males and females, myopia rates were higher in urban areas than in rural ones. As a matter of fact, no cases of myopia were diagnosed in rural areas. . . .

□ "As discovered in studies in other countries, there is, in general, an increase in rates for every affection investigated with increasing age. The age-specific rates were especially high in the oldest age groups for keratitis and cataract in both urban and rural areas and, in addition, for glaucoma in the rural areas. It should be remembered that the nonexistence of sulphonamides and other antibiotics 30 or more years ago may explain the high rates of keratitis in the older populations now.

"The rate of blindness in the younger groups is greatly reduced in both rural and urban areas (about one-twelfth the rate of those 20 years and older). One is tempted to conclude that older persons, especially in rural areas, did not receive the proper medical care at the proper time. This lack of care may be due either to a lack of medical facilities in the village and nearby areas or to the difficulty in traveling to the nearest medical facility. In addition, poverty, together with a low educational level and unsanitary habits, played their role in producing the comparatively high rates of blindness in rural areas. . . .

□ "Blindness can be greatly reduced if eye infections are treated promptly. From the observations resulting from this study, it is evident that proper eye treatment, medication, or surgery should be available for all persons with eye conditions, particularly for those persons living in remote places. This preventive care is especially important since a fair proportion of persons could have their eyesight saved if such treatment were available.

"Eye hygiene was not receiving adequate attention either from the public or from health authorities some 20 years ago. Thus, prevention was to a large extent being neglected at great risk. This lack of attention emphasizes the need for a good program of health education for protection of the eye and preservation of eyesight for all age groups in all countries. Intensive efforts to achieve this goal have been made in Egypt in recent years."

Blindness prevalence rates

Blindness and Aging

Lower rates among the young

Treatment and Prevention

Cane Travel in Winter

Being a peripatologist in Canada offers certain unique experiences probably not enjoyed by many other instructors in the field. The most obvious, unfortunately, is exclusiveness. At this time, there are no other instructors in Canada who have received graduate training in the specialty of orientation and mobility, although a second graduate is expected to join the staff of the Montreal Association for the Blind soon. Some schools and agencies in Canada still employ blind staff from other disciplines as part-time mobility teachers and the majority of instructors are agency-trained and seriously lacking in basic qualifications to work with blind persons.

□ One dubious benefit of working in Canada, however, is the opportunity to spend more of my time teaching under winter conditions than most of my colleagues in the United States. If nothing else, it has presented me with the challenge of observing varying winter conditions and formulating generalizations that may be of use for orientation purposes. Since Montreal does not have a complete monopoly on winter conditions, I hope that others may find my observations on snow travel useful and beneficial.

Almost without exception, individuals who commence orientation and mobility training in the summer months express concern about traveling in the winter. "What are we supposed to do in the winter?" "I suppose it is impossible to travel independently once the snow arrives." To questions such as these I reply that, indeed, traveling in the winter is more difficult than in the summer, but it is by no means impossible; in fact, a good traveler in the summer is inevitably a good winter traveler. In addition, I mention that most winter conditions are not difficult to master and are in some respects advantageous to the cane traveler. For example, a bank of snow at the side of the road prevents many trainees from slipping off the curb or wandering inadvertently into the street. Many small cracks or ridges get filled with snow and prevent the cane from sticking as would be the case under clear conditions. Sidewalks that are strewn with permanent obstacles such as poles, fire hydrants, signs, etc., are much safer in the winter because seldom is the snow cleared away from them too closely. As a result, many dangerous obstacles are encircled by a convenient buffer of snow throughout much of the winter.

It is quite true that some winter days are particularly disagreeable, and one would not venture out-of-doors except from necessity. On such occasions an offer of a lift or a taxi would seem the best alternative, but, unfortunately, everyone else has the same idea and so taxis are scarce.

What makes mobility for blind persons more difficult in the winter than in the summer? The lower temperature is unpleasant to most people and often necessitates the donning of ear muffs or a hat that hinders hearing to some

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Winter Conditions in Canada

Travel is more difficult in winter

Disagreeable and more strenuous

degree. The wearing of gloves decreases the sensitivity of the cane. It is also readily apparent that walking on snow-covered sidewalks is more taxing on one's ability than when they are clear.

□ These factors, however, can be overcome with perseverance and practice and are not, in themselves, responsible for making winter travel difficult. It is the continually varying sidewalk conditions that pose the greatest problem for blind cane travelers. If, after adjusting to several days of hard-packed, snow-covered terrain, the temperature rises and the snow melts, the blind person is immediately faced with an entirely different set of circumstances. If the temperature drops after a melting period, the conditions and accompanying problems vary again—and so it goes throughout the winter. It generally requires an experienced, adaptable traveler to overcome the navigation problems of winter successfully.

To be successful, a winter cane traveler must learn to concentrate on what I describe as "basic direction" rather than physical landmarks. In sub-freezing weather, even without snow, grass becomes rock-hard. This makes the recognition of grass, pavement, and gravel with the normal touch extremely questionable. With the addition of snow, the location of other landmarks (curbs, ridgelines, driveways, etc.) becomes equally suspect and unreliable. Traffic becomes the overwhelming asset and guide. I emphasize again and again that basic direction is the key and that one should keep moving as steadily as possible to retain a sense of basic direction. If one has to stop, examine, and evaluate every peculiar mound of snow or unusual situation, one would quickly get discouraged. Just as cars find it advantageous in snow to keep moving and to try to avoid stopping, so it is with the cane traveler.

There are a few modifications in technique that help a great deal and several are recommended. Generally a one-piece cane is better suited to winter travel than a collapsible cane. A heavier cane is usually better than a light cane. A heavier touch, with a slightly narrower arc, is superior with new snow or light, falling snow. Once the snow becomes hard-packed, a lighter than normal touch, with total concentration on traffic alignment and basic direction, is helpful. The "sweep" motion of the cane is the most useful under most types of snow conditions. A sweep of the cane on the sidewalk will at once inform a traveler as to the conditions he is likely to encounter on the following block. A sweep is superior to a "tap" in that it covers a greater area and indicates the texture of the terrain more readily. The "touch and slide" method of trailing can be used successfully in the winter when the standard method fails.

□ A blind person who is about to embark on a solo excursion in the winter should begin by compiling as much information about the travel conditions as possible. It is a valuable asset to have a sighted person available to look out the window and describe the conditions and answer such basic questions as: "How clear is the road and the sidewalk?" "Is there bare pavement, and where?" "Where are the banks of snow?" "How deep is the snow on the lawns?" "What texture is the snow on the lawns compared to the snow at the side of the road?" "Do the curbs at the corner look distinguishable?"

Variability of Conditions Is Greatest Hazard

"Basic direction" is the key

Modifications of technique

Orientation to Constantly Changing Conditions

“Are usual landmarks such as poles, fire hydrants, bus stops, stop signs, etc., approachable, or are they buffered with a circle of snow?” “Are there any portable snow clearance signs visible that may be encountered?” “Do the driveways appear to be distinguishable under foot?” No travel area is identical and a trainee can quickly learn the basic questions he should ask to gain as much useful information as possible about his district.

If it is not possible to get a sighted person’s information as to the travel conditions, a blind person must discover it for himself. Upon reaching the sidewalk, a short exploration is beneficial. The cane should be swept across the sidewalk to determine width of travel space, firmness of terrain, and perceptibility of the curb. If there is a bank of snow covering the curb, its consistency and height should be determined. The consistency of the bank is important because it is always different from the snow covering the lawns. The cane should be swept lightly against the inside shoreline and then on top of the grass to determine consistency of the inside snow. While navigating the first block, particular attention should be paid to recognition of driveways and other landmarks which are familiar. Likewise, the first street crossing can be used to get a reasonably good idea of how clear the streets are, the corners, etc. Once the general characteristics are known, full concentration should be given to retaining the basic direction.

□ When discussing orientation clues in the winter, it is advantageous to know the general kind of snow clearance that is provided and the stage that has been attained at the time of traveling. For example, snow clearance in a typical residential or small business area usually follows these steps: clearing the main streets, leaving snowbanks at the side, covering the curb; minor streets and sidewalks are plowed leaving more banks; sidewalks of major streets are cleared; salt is spread on major streets, melting the snow; sidewalks of minor streets are cleared and sand is spread if the conditions are icy; snowbanks are cleared away from the curb slightly into the street giving the illusion, if the curb is not perceptible, of having a fairly wide sidewalk; snow blowers remove the remaining snow by blowing it onto the lawn or into trucks; men with shovels clear remaining snow from around fire hydrants, newspaper boxes, parking meters, and similar landmarks. At this point, the main roads are usually clear and bare, although often wet. Minor streets often have a hard-packed snow cover, as do the sidewalks. Curbs have become readily discernible. Traveling now is relatively easy until the next snowfall, thaw, or cold spell.

If temperatures rise above freezing, certain clues become discernible. Water, flowing into sewers, sometimes points the way to the streets. Slush becomes predominant in driveways. Water, dripping from buildings and trees can often help in re-orienting or maintaining one’s basic direction. Water in the gutter often is the clue that one is straying into the street.

If the temperature drops quickly below freezing, perhaps the most confusing of all conditions results. The frozen ice and snow create numerous illusions of curbs, corners, and driveways. Often, only a narrow footpath has been beaten by pedestrians; however, the road is often quite clear and

Exploration of environment

Knowing Pattern of Snow Clearance Is Helpful

Clues when melting occurs

Conditions after a quick freeze

smooth. The snow on the sidewalk is much smoother than the snowbank at the side of the road. Driveways are often quite rough with frozen ruts and car tracks running perpendicular to the sidewalk. This roughness occurs where a car has backed over the driveway, either during a storm or before the walk was adequately cleared, leaving tire depressions which have subsequently frozen.

A cane traveler is more likely to encounter parked cars in the winter because of straying inadvertently into the street or a driveway. This can be an excellent confirmation as to where he is, depending on the direction the car is facing and the point at which contact is made. Striking the side of a car on the traveller's streetside means the car is parked beside the curb and he is on the sidewalk near the edge. Striking the front or back bumper of a car directly in front of him usually indicates that he has strayed into the street. Striking the side of a car in front of him may indicate that he has strayed into a driveway, that the car is parked in the driveway but partially, extending over the sidewalk, or that he has come to a wide street that is crossing to the inside. Other situations, of course, can be indicated by parked cars, but it is helpful if the traveller can acquire as much orientation value as possible from the encounter. Any sudden change from previously consistent terrain should be examined carefully. A change from a snow-packed sidewalk to bare pavement, for example, usually indicates being in the street.

□ The orientation clues that exist in winter will, of course, vary somewhat in each district or town. Whatever the individual characteristics are, the efficient application of retaining the basic direction of travel and of stopping only when physically necessary is the key to success in winter travel. Proficiency in retaining the basic direction of travel can be practiced satisfactorily indoors in a large open space, such as a gym, hall, or auditorium. By squaring off at a starting point on one wall, a trainee can be placed directly opposite an objective on the far wall. This objective should be continually kept in his mind's eye. At first, straight line travel should be practiced until veering is eliminated; then, benches, chairs, and other such obstacles are systematically placed in the path. Begin simply with one bench that will be contacted at right angles. Once this obstacle has been mastered, the angle of contact should be altered from 90 degrees to 45 degrees. To bypass an angular obstacle and yet retain the basic direction is more difficult. When this is mastered, other angles and more obstacles can be added. If a trainee has unusual difficulty in retaining his basic direction, a sound beacon can be placed at the objective to mark the location. This can be withdrawn as improvement is noted.

Can a blind person travel adequately in the winter? I suppose that question can best be answered by the experience of a middle-aged woman who was a trainee two years ago. She had reluctantly commenced her orientation and mobility program in the late fall; she was convinced that travel in the snow would be impossible. As the instruction drew to a close in the early spring, she again became concerned. "But how am I going to travel when the snow is gone?"

Parked cars as orientation clues

Developing Proficiency in Retaining Basic Direction

Junior High Readiness and the Blind Child

The readiness of children to go into any new program is a most important consideration. We are constantly made aware, for example, of the importance of the readiness of children who are about to go to school for the first time. Volumes have been written about reading readiness. The readiness of the child entering junior high school is especially important because of the many transitions to be faced by him at this phase of his life, perhaps the most difficult transitions of all those he will encounter during his school years.

□ In discussing the readiness of the blind child for junior high school, we must keep in mind not only the general needs that all students have and the special needs that are specifically related to the fact of a child's blindness, but also the problems caused by the de-emphasis of the child's general needs because of his special needs. In the following discussion we will consider some of the general aims of education in preparing children for junior high school and the response to the needs of blind children. More specifically, we will discuss the special skills that the blind child needs and the problems he will encounter because of his blindness.

The term "blind child," as used in this discussion, refers to those blind from birth or soon thereafter, even though there will be applications for those who have lost their sight during their early school years or for those who are partially sighted. In addition, the blind children being considered here are those who are in the normal age range for advancement to junior high school; whose intellectual growth is thought to be normal; whose academic performance is up to standard; whose physical growth, other than visual, is satisfactory; and who have spent all or most of their school years in a public school system.

The public school plays an important part in preparing children for junior high school and beyond. It is its duty to provide the blind child, as it does all children, with the opportunity for maximum educational growth. The blind child should be allowed to spend the greater part of his time in a normal classroom situation, with a specialist available to train him in the special skills he will need. The necessary equipment to do this must be available, as well as a special room in which to work. Although there is not complete agreement on the objectives of the elementary school, it is clear that it must lay an educational foundation of skills, knowledge, and attitudes. One set of aims, suggested in 1960, include individual self-realization, citizenship, social mobility,

The author wishes to express her appreciation to the many teachers of the visually handicapped who were of invaluable help in discussing this topic and in presenting their opinions and experiences. A special expression of gratitude is due Dr. R. A. Bowers of Teachers College, Columbia University, for his encouragement and direction.

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General and Special Needs

Definitions

The role of the public school

preparation for the world of work, and comprehension of experiences, services, and goods that contribute to health and satisfaction.⁴ The elementary school must also deal with such developmental tasks as learning the physical skills necessary for ordinary games; building healthful attitudes toward self; learning to get along with age-mates; learning one's sex role; developing the fundamental skills necessary for success in reading, writing, and quantitative thinking; developing a conscience, morality, and an adequate sense of values; and developing good attitudes toward social groups and institutions.² Success in achieving these goals provides the background from which every child's readiness for junior high school will develop.

□ As has been noted, the transition from elementary school to junior high school involves many changes for the child. Among these are the following:

1. The child goes from the self-contained regular classroom and the constantly available part-time resource room to the changing of classes and teachers and the less frequently available itinerant teacher whose main responsibility is to guide him toward greater independence and self-sufficiency.
2. There is a change of emphasis from the basic skills of the elementary school to the extra demands of specialization in the departments of a junior high school.
3. This is an age in which belonging to the group is very important and in the junior high school setting it is more difficult for the blind child to satisfy this need.
4. Junior high school marks the end of activities of pre-adolescence and greater participation in the more mature activities of early adolescence.
5. The shift from the social patterns of childhood to those of adolescence begins the distinction between the activities of the sexes.
6. There is the beginning of more responsibility for the blind child for making decisions regarding his own specialized needs.

To take his rightful place both in school and in other phases of life, the blind child must learn to function in a sighted world. He must accept the reality of his blindness and the fact that functioning well will involve great effort and determination on his part. He must realize that he will encounter teachers who will be reluctant to accept his use of special equipment in the classroom and others who will be unfriendly towards him or will obviously only be tolerating him. Jerome Siller has pointed out that "Surveys of attitudes toward physically disabled persons indicate that although public verbalized attitudes toward the disabled are usually mildly favorable, a sizable minority openly expresses negative attitudes. Indirect evidence suggests that deeper, un verbalized attitudes are more frequently hostile."³ To succeed in such a world it is, therefore, important that the child develop a feeling of adequacy, competency, and self-esteem. Once these feelings are developed, he is less likely to succumb to the devaluating ideas of others. "The blind almost universally complain of the attitudes with which the seeing regard them. . . . Nevertheless, it is remarkable to discover the extent to which the blind themselves have adopted the attitudes and evaluations they so heartily condemn."¹

Six Changes for the Child at This Time

Attitudes and adjustment

An important area of readiness for junior high school is the development of orientation and mobility skills. By the time a blind child is ready to attend junior high school he should be able to get around without undue hesitation in familiar places and to evaluate where he can and cannot go safely. He should have the ability to orient himself to his classrooms and to find his way around easily if it is necessary for him to travel in less familiar areas. It is important that he be given the opportunity to investigate the building before school starts and to have an introductory tour. While most of these skills should be developed while the child is still in elementary school there will still be room for continued improvement as the child is given more freedom and independence. Particularly important for his acceptance by his peers is the elimination of the more outstanding undesirable traits (shuffling of the feet, swaying, poor posture, hesitant gait, ignoring obvious aids to travel like handrails, and "plowing" ahead recklessly).

□ In the academic area, proper preparation in reading skills is, of course, particularly important. The ability to read braille smoothly and easily is essential, as are auditory skills and the use of both the talking book machine and the tape recorder. Practice in the use of time-compressed recordings will, in the future, also be a great help. By the time the blind student is ready to enter junior high school he should be proficient not only in the use of the braillewriter, but a variety of slates (for taking notes) and possibly the Banks brailier, a pocket braillewriter that many students find useful. The ability to produce accurate typewritten copy also cannot be neglected, especially in junior high school where themes and term papers are regularly required. The new IBM braillewriter, which has a standard typewriter keyboard, should prove quite useful in teaching blind students to use a regular typewriter. The matter of script writing for blind students in public schools is somewhat controversial. The consensus seems to be that this skill is best introduced sometime during the high school years and therefore it should not be stressed in the preparation of students for junior high school. In preparation for more advanced courses in mathematics, the blind student should have a basic understanding of numbers and the ability to use reason rather than a dependence on rote memory. He should have had wide experience in the use of tactual mathematics aids, the reading of graphs, and the use of the abacus. He should know the Nemeth Code of Braille Mathematics and Scientific Notation at least for the level of mathematics he has reached.

From various studies of child development, we learn that there are two important considerations which must be taken into account when dealing with children: first, each child is unique; second, there are certain characteristics that are typical of each age group. Also, we must realize that, although there is a sequence of growth for all children, the rate of this growth varies with different individuals. Further, it is of the utmost importance that each child preserve his own uniqueness while moving through the definite cycles of development that he has in common with other children of the same age. Finally, we must note that just before entrance to junior high school, boys and girls start to develop their own individualized tendencies in addi-

Orientation and mobility skills

Academic Readiness

Developmental considerations

tion to those they have in common. Eleven- and 12-year-old girls are more mature than boys and are beginning to be "boy conscious," even though they are still interested in their academic subjects. They are also awakening to the subject of personal appearance and are becoming more "clothes conscious." Boys of this age are more apt to be interested in sports than in the social aspects of life.

Keeping in mind, then, that the child is a composite of individual differences and common tendencies, we can take a closer look at some of the personal and social traits which would be desirable. The composition of personality encompasses many things; it is expressed in one's characteristic ways of thinking, believing, acting, and feeling. Personality develops as one matures and experiences life.

□ We would expect the incoming student to have established, in his own mind, a sense of his own personal worth. He needs to be building wholesome attitudes towards himself as a growing organism and should be learning an appropriate sex role. Also, we trust that he will have been provided with an opportunity for the variety of experiences that lead to the attainment of emotional equilibrium.

The blind child, because of his impairment, needs particularly to have developed a feeling of belonging. To attain this he will need to accept his handicap and to relate quite naturally to his sighted peers. He must, to some degree, have a sense of personal freedom in spite of his impairment and should have developed a sense of self-reliance.

As he has been approaching junior high school, it is hoped that the blind student has formulated the concepts necessary for everyday living. He should have developed his own internalized system of values which are not in conflict with the society around him. He should have a code of integrity in dealing with others that is above reproach. (This is meant in an all-round way and also in special ways peculiar to blind-sighted relationships.)

A careful analysis of each child's background will provide the school with the necessary information it needs to understand the student and to place him correctly. The lack of vision certainly affects the blind child's ability to perceive and relate all details in a given situation and this can, as we know, lead to distortion and faulty concepts. It cannot be assumed that they have benefited equally from experiences or that learned facts have the same meaning for them as for the sighted. In fact, there is very little known about how a congenitally blind child does learn. Educators, therefore, should realize this and provide for correctional and supplementary aid. As a result of this specialized training, coupled with the routine of the normal class situation, we are justified in expecting the child to live up to certain standards and to have definite aspirations of his own for success.

By the time he comes from the elementary school, we would expect that he would be effectively motivated to take his place in junior high school. In his approach to his school work, it is important that he not only have enthusiasm for doing it, but have been taught to follow through with it. He should have learned to take notes because many of his class periods will be lectures.

Personality Traits

Personal values

Perceptual skills

Work habits

Many teachers will not specify exactly what notes should be recorded, but will expect the proper information to be recorded, studied, and known for discussion and testing. This note taking skill will, of course, need to be taught and practiced in the resource room, for the blind child needs this skill more than his sighted peers.

Additional instruction and evaluation in the skill of paragraph writing will aid the student in learning to develop a complete thought, a skill of vital importance to him. This competence needs to be applied more extensively so that the skill of composing is used in writing interesting and informative themes. This talent, which will be particularly useful when taking essay-type tests, writing compositions, doing special reports, etc., is one which, I feel, has not been given proper attention by special teachers, but which is paramount in a readiness program. Instruction in the simple documentation of research assignments and the setting up of a simple bibliography should also be given by the special teacher. It cannot be assumed that time will permit it to be thoroughly dealt with in the regular classroom.

The blind child, by the time he is ready for junior high school, should know where to secure materials for research projects, book reports, etc., on his own or with minimum help from his parents. The need to procure enrichment materials will increase as he progresses from year to year in school and the special teacher will not always be there to get everything for him. He should also be encouraged to do as much leisure reading as possible. Although reading can be beneficial in so many ways, it too often is limited to only what is demanded.

□ While discussing fundamentals needed for successful performance in his school career, we should be cognizant of the importance of the mastery of listening skills for the blind child. The child will hear what he has been trained to hear and, therefore, his listening must be attentive and purposeful. The information amassed, the resulting enjoyment, the increased appreciation of the many results of sound, the sharing in the opinions of associates, the learning to detect the moods of others, and the gaining of a feeling of sharing in what is going on are a few of the benefits derived from well developed listening skills. Proper listening habits help establish certain courtesies such as giving one's undivided attention, showing one's interest in what is going on, being ready to respond when expected to do so, and not interrupting when someone else is talking.

Time and effort should be devoted to teaching the blind child the good habits of a well-organized person. The special teacher, the parents, and the classroom teacher all have to encourage and help establish these traits. It is hard enough to keep track of materials when one has sight and it follows that a blind person must be more keenly aware of organizing his belongings. He should know what he has, where it is, how to use and care for it, etc. He also needs to develop organized study habits and a sense of responsibility in meeting due dates for assignments. As it has been said, "Outer order promotes inner security."

Attention also needs to be given to providing opportunities for the blind

Writing and basic research skills

Listening Skills

Child should be well-organized

child to make decisions. It is essential that he become a good decision-maker in order to function effectively in a sighted world. There will be many situations in secondary school when the blind child will need to be able to help those who work with him. He needs to be able to suggest alternatives to his teachers and to others when they are not sure how to proceed in a given situation.

Continuing our discussion of junior high readiness, we must look in a few other directions on our educational map. The blind child will have to be industrious and be able to work without prodding, because it will take so much more effort for him to do the same work as his sighted classmates. He will have to learn to take time and care in his work to be sure that it is accurate.

School work is not limited to academic subjects and it would be hoped that the student has developed skills useful in the manual arts, has an appreciation for fine art and music, and has learned physical skills, all of which are basic in the development of the "whole" person.

□ Social fulfillment is important at any age, but it seems to be of special importance to the adolescent and, therefore, we would expect the pre-adolescent to have a good foundation in this area of growth. By now he should have learned to get along well with others and to enjoy the company of the boys and girls with whom he comes in contact. He should have learned that to have friends, one must be a friend. The development, to some degree, of a concern for others is essential (the blind do tend to be very self-centered); he must have learned to respect the rights of others and to be considerate of their feelings. The establishment of new kinds of relationships is in order at this time and there should be some evidence of socially responsible behavior. It is to be hoped that in spite of his blindness, the student will take the initiative at times and not merely conform in classroom and social situations. Further, we will look for the following traits: sincerity; enthusiasm; reliability; cooperation; ability to meet people; and ability to reason; all of which are fundamental for the development of any candidate for junior high school.

Readiness, we find, stems from a complex network of contributing factors. This paper has endeavored to demonstrate that there are realistic standards which can be used for judging when a child is ready for junior high school. Further, I hope, it is clear that because a child is blind he need not be left behind, but, instead, that he can compete and achieve in a seeing world and be expected to meet very definite standards of behavior and achievement.

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Industriousness

Social Fulfillment

In summary

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Providing Ophthalmological and Optometric Diagnostic Examinations and Optical Aids for Legally Blind Aged Persons Under Medicare

It is inexcusable not to take action, where such action is possible, to prevent, eliminate, or reduce a damaging eye condition, to arrest the progress of such a condition, or to maximize the usefulness of seriously impaired vision. Needless disability is reprehensible in any case, but among the aged it is particularly debilitating and cruel. Individuals in this group generally lack the reserve of energy, time, and other resources that often enable younger persons to train around a disability and achieve a satisfying way of life. With few exceptions, the rehabilitation of a disabled aged person, even if it lessens his dependency to a significant degree, does not restore him to a life-style comparable to that which would be his if he were not disabled.

□ Aged persons who have little or no income to supplement their Social Security income, under the best of conditions, find it extremely difficult to maintain themselves. If they are required to cope with blindness, their capacity to maintain themselves is greatly reduced. They are either forced to struggle with the problems of sheer survival on a less than satisfactory subsistence level or they are forced to become dependent upon their families or to enter institutions for protective care. Aside, therefore, from the inhumanity of needless blindness, investment in the prevention, elimination, or reduction of blindness in aged individuals is justified by the economic dividends it can pay. It can release individuals in many families for productive work, reduce the need for institutionalization or, in any case, the need for special institutional services created by extreme dependency.

A recent survey by the Industrial Home for the Blind, Brooklyn, of more than 5,400 institutionalized aged persons found that over 16 percent of these persons were legally blind. A high proportion of the legally blind group had remediable cataracts. Some were found to have glaucoma, infections, and other conditions that had been neglected prior to the survey. The usefulness of the residual vision of many of the legally blind group could be significantly improved with carefully fitted optical aids; and many, both within and without the legally blind group, who could benefit from regular spectacles either had no spectacles or were using some which had not been changed for a great many years or which had been prescribed for other persons.

The situation revealed by the survey of the Industrial Home for the Blind—other surveys have produced similar findings—dramatically points up the fact that aged persons with severe visual impairment can be spared needless disability and needless dependency through proper eye care. The cost of providing such aged persons with this eye care would be offset many times by the avoidance of costs incidental to their needless dependency—not to mention the psychological and moral values that would result from it.

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Blindness and the Aged

Results of recent IHB survey

A strong case could be made for providing routine eye care and glasses for all aged persons under Medicare; but, even accepting the assumption that the cost of these would be prohibitive, the cost of preventing needless blindness in aged persons and the needless dependency usually associated with it would be small, indeed, as compared to the cost of failing to do so.

□ The possible abuse of regulations to provide ophthalmological and optometric diagnostic examinations and optical aids to legally blind persons under Medicare might be guarded against by the following procedures:

1. All special eye-care services—diagnostic ophthalmological examinations, diagnostic optometric examinations, and the fitting of lenses—might require special written authorization which the aged person would present to his doctor in the form of an authorization slip appropriately completed and signed by an authorized representative in his local Social Security office.

2. Where there is no previous history of blindness, authorization for a diagnostic ophthalmological examination might be given only where there is a clear indication of a significant loss of vision or a valid complaint of pain or major discomfort. The Social Security representative might require the aged person's family doctor, a social worker from a public or private agency serving the person, or any other interested professional individual to provide support, based on objective evidence, for the aged person's request for authorization for a diagnostic ophthalmological examination before he issues such an authorization.

3. The report on any diagnostic ophthalmological examination paid for with Medicaid funds should require (a) a statement as to whether or not the use of lenses are contra-indicated (a form similar to that used by the New York State Commission for the Blind and Visually Handicapped might be used for this purpose) and (b) a chart or description providing information on the field of vision of the patient. If a doctor indicates that the use of lenses is contra-indicated, he should be required to explain the basis for such an indication. Accurate information on any significant constriction in the field of vision of an aged patient is commonly not available because the charting of the field of vision is apt to be rather time-consuming and many doctors are reluctant to invest the time required to complete such charting. However, as glaucoma, various forms of pigmentation of the retina, and other eye conditions common in older persons tend to constrict the field of vision, it is particularly important that the fields of vision of aged persons be carefully charted. The safety of aged persons with constricted field of vision can be greatly enhanced if they can be helped to understand where they cannot see and what they can do to guard against tripping, bumping, or misstepping.

4. Where a classification of "blind" for an aged person is available, the person should be given authorization to obtain a diagnostic optometric examination from a certified low vision specialist, provided he has not previously had such an examination or has not had such an examination since the occurrence of identifiable changes in his eye condition. Authorization for such an examination should require (a) a classification of "blind" or other

The cost of preventing needless blindness

Guarding Against Possible Abuse of Medicare Regulations

Information on field of vision is important

evidence, acceptable to the Social Security Administration, of severely impaired vision; (b) evidence that any medical or surgical treatment that may have been indicated to improve the eye condition has been completed; and (c) assurance that the use of lenses is not contra-indicated.

5. Where a diagnostic optometric examination by a certified low vision specialist (such a specialist may be either a specially trained optometrist or a specially trained ophthalmologist) indicates that special lenses or other optical aids or that carefully fitted regular lenses will significantly improve the usefulness of the residual vision of an aged person with severely impaired vision, authorization should be given for the appropriate optical device to be provided for the person under Medicare.

Low vision aids

6. Re-examination or replacement of optical devices under Medicare for an aged person might be authorized only (a) after a major change in the vision of the person has occurred; (b) when a device which he has been successfully using has been lost or seriously damaged through no fault of his own; or (c) after a new surgical, medical, or optometric technique or a new device has been developed which holds promise of significantly improving his vision or increasing his use of his residual vision.

A Vocational Interest Scale Administered in Braille

Al Manaster, a staff psychologist in the Chicago Area Office of the Illinois State Employment Service, and Tom Walker, an instructor of braille at the Illinois Visually Handicapped Institute, Chicago, report that using a braille version of a vocational interest scale has several advantages. The test, the Curtis Interest Scale (Chicago: Psychometric Affiliates, 1959), produces 10 occupational family scores which are useful in planning an individual program of vocational rehabilitation.

Curtis Interest Scale

Five groups of 10 activities each are presented to the subject who rates the activities in each group on a scale from zero to nine, from least preferred to most preferred. Usually such a test is administered to a visually handicapped person by reading the lists to him and then recording his responses. Manaster and Walker, however, put the instructions and the lists into braille so that the subject could take the test himself.

This arrangement, they report, gives the subject a "feeling of having taken an active part in the evaluation and renders his behavior more like that of sighted subjects. In addition, his ability to follow instructions and to work on a task independently can be observed."

The Geographically Deprived

My introduction to the work of rehabilitation counselor was in a rural part of Texas where I served some 36 counties, all of which were outside the county in which my office was located. At that time, one county had only about 110 people and had to import its water from a neighboring area. The most populated county had no more than 90,000 people. For over two years, I traveled and tried to provide services to the people in these areas and I think I am aware of some of the problems of getting quality services to visually handicapped persons in rural sections of the country.

In July of 1968, I was transferred to El Paso, Texas, and assigned to a six-county area which includes some of the most remote country in the state. One town especially comes to mind because of its isolated location. Candelaria, Texas, is 46 miles up the Rio Grande from the small, hot, dusty town of Presidio. After a bad West Texas rain, there is no travel to Candelaria as both dirt roads into the town are washed out. About 12 to 15 families live there and all income for the village is derived from farming.

Presidio, the down-river sister city to Candelaria, has 1,068 citizens and lazily sprawls across the river from the Mexican city of Ojinaga, which, by the way, has more than 5,000 citizens. Up and down the river from Presidio are many small, meticulously groomed farms, each averaging about 15 to 25 acres and providing the livelihood for a usually large family. Little else about making a living is known by the families of this part of the country; and, in most instances, the entire family is expected to assist in the planting, cultivating, and harvesting of the onions and cantaloupes, the primary crops in the area. The entire economy of the area is based on farming and nearly every person spends a considerable part of his time outdoors.

□ In the past I have heard ophthalmologists speculate on the relationship between the incidence of pterygia and outdoor activity, especially in hot, dusty areas where there is a great deal of sunshine. I personally began to notice that, in Presidio, I was constantly seeing individuals with eye conditions similar to pterygia; the waitress in the cafe, the service station attendant, the maid in the hotel, the farm hands walking along the street, and many others had pterygia-like growths. Realizing the importance of treatment for this condition, I would ask these people whether they were aware of their eye problem and whether they experienced any discomfort. Most said yes, and with this opening, I would describe the services of the agency and invite them to apply. In this way we were getting to some of the people, but I was bothered with the fact that there were many persons whom I would not chance to meet and who, because of the lack of communication and medical attention in the area, would not have the opportunity to apply for services

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Many sparsely populated areas in Texas

Eye Care Is Often Neglected

from the agency. I decided to find some means of reaching these people because I felt that they were being geographically excluded from services which they needed and for which they were eligible.

□ After some brainstorming with Miss Alicia A. Jimenez, the director of the Community Action Center in Presidio, Dr. Fay Millett, an El Paso ophthalmologist, Barbara Newman, Anthony Cascio, Louis Larralde, and all professional workers in the El Paso office of the Commission for the Blind, I began to envision a clinic-like operation whereby the personnel of the agency could take the services of the agency to the prospective client on a large scale. Working with the persons mentioned above and with Jack Davis, representative of the American Optical Company, a radio station in Ojinaga, Mexico, and a group of volunteers we planned "Operation Presidio."

One of the major difficulties in working with visual problems in such a remote area is that often there is no ophthalmologist in the area. In the case of Presidio, the nearest eye medical specialist was 240 miles away, in Odessa, Texas. Realizing this, we contacted Dr. Millett and asked whether he would make a trip to the area to do the initial eye examinations. He agreed to make the trip, but stated that he did not have all the portable equipment necessary for a good examination. He suggested that we contact Mr. Davis, who agreed to lend us, without charge, a slit-lamp and stand. This, along with the equipment that the doctor could transport, gave us the tools to do complete examinations.

Since we had the medical facilities, our next consideration was to get to the people. Miss Jimenez handled this for us and did an outstanding job. By word of mouth and by a short public service announcement over the Ojinaga radio station (the only station in the area), she was able to assure us that, if we would come, the referrals would be there.

Our plan was for the personnel of the Commission for the Blind to go to Presidio one week before the doctor and to do the initial screening, including explaining the services of the agency and taking applications from those who wished to apply. On a bright, hot July 17, 1969, we pulled up to the Community Center in Presidio and found some 100 persons waiting for us. Two counselors from the vocational rehabilitation division and the caseworker from the children's program of the agency were there to talk with the people and to take the applications for service. I spoke to the group and then we quickly spoke individually to each person, explaining services and questioning them about their eye problems. Appointments were made for the rest of that day and all of the next with the result that 70 persons applied for service. After we had seen everyone, we rushed back to our offices in El Paso to complete the paper work and to prepare for our return to Presidio.

When we arrived in Presidio with Dr. Millett and the equipment on a hot Sunday afternoon, the people of the community had prepared a cook-out for us down on the bank of the river. Hot chicken, steaks, and green chili with cold beer and watermelon made for a memorable evening. At eight the next morning, we were all at our stations and ready to begin work. Seven persons were used in assisting Dr. Millett in the examinations: two took eye medical

The Idea for "Operation Presidio"

Nearest ophthalmologist 240 miles away

Publicity

Advance group did initial screening

Royal reception by community

histories, one read eyeglass prescriptions with the scope, two did visual acuities, one interpreted for the doctor, and one put the dilating drops into the examinees' eyes under the doctor's supervision. Amazingly, we were able to complete all 70 eye examinations in two full days. The method used in doing the examinations was:

□ 1. The examinee was seated at a table and asked to explain in depth what was wrong with his eyes, any previous treatment or surgery, whether he wore glasses, etc. This information was written in the history section of the agency's eye report form along with his name, address, and age. Also, the doctor's initial contact form was filled out. These two items along with a plain sheet of paper were stapled together and given to the individual.

Method of Examination

2. If the examinee wore glasses, they were taken to the prescription reader where the prescription was read and recorded on the plain sheet of paper.

3. Next the referral went to the chair for the Snellen and Jagger chart reading. His visual acuity was recorded on the eye report form for both near and distant vision, with and without his glasses. At this station we had two workers and two chairs to keep the work flowing.

4. After this, the examinee went to the slit-lamp where the doctor examined his cornea and the rest of the surface of the eye.

5. Next he went to a cot to have the dilating drops put in his eyes.

6. After he had been sitting long enough for the drops to take full effect, he went to the doctor's chair where the internal eye examination was done.

7. The last step in the examination was for the doctor to carefully explain to the examinee the results of the examination.

As with most experimental programs, there were some problems, some of which we quickly recognized once "Operation Presidio" had gotten under way. For example, we were probably over-referred in that many cases of simple presbyopia were found. Those individuals were referred to the local Lions Club for purchase of glasses. About 14 surgical cases were found; all of these have been certified as active clients and services have been initiated. This points up another possible problem: our referrals were all for physical restoration. We soon realized that we had stressed this area of service to the neglect of other areas. There were no inquiries, for example, about training and placement. Realizing these shortcomings, we began making plans for our second endeavor, "Operation Alpine," which was to be held in Alpine, Texas.

Referrals largely for physical restoration

□ One week before the initial screening session of "Operation Alpine," three representatives of the El Paso office went to the Alpine area and contacted virtually every available doctor, counselor, school nurse, and social worker in the area. A short article was written for the local weekly newspaper. Somehow this article was run in the daily San Angelo newspaper and we suspect it was included in other area papers. We presented the program for consideration by the Alpine Lions Club and received their cooperation in promoting it and in paying for glasses for any persons who did not meet the agency's eligibility requirements and who did not have the money to purchase glasses for themselves. We contacted the station manager and pro-

"Operation Alpine"

gram manager of radio station KVLF and were given excellent radio coverage for the project. As many as 12 spot announcements were made in English and Spanish over a five-day period. An 18-minute taped interview was aired at least twice for the listeners. The disc jockey for the Mexican program listened to the interview and translated the information into Spanish for his listeners. The pastors of the churches of the area were contacted and announcements were made from the pulpits and in the Sunday bulletins.

This time, with the cooperation of the Methodist Church and Mr. and Mrs. Samuel Buck, directors of the Alpine Community Center, we were able to use the center for our initial screening and the eye examinations. We used the stage for the eye examinations since we could raise and lower the lights as needed without affecting the rest of the auditorium. Because our planning and publicity had been better, our referrals were more varied and appropriate; the overwhelming majority of the persons seen could be served in one way or another by the agency. We did eye examinations for three days and saw 91 persons. We received referrals for the children's program, for training and placement, and for physical restoration. This time we took Tommy Bodine, a placement specialist in the agency with us; he interviewed and began placement planning with those referrals who seemed to be likely candidates for this service. In essence, we were much more oriented toward vocational rehabilitation on this project than on the former and, therefore, we were able to talk to people who knew better why they were there.

□ At this writing, we are in the process of gathering diagnostics and determining eligibility on the referrals from Alpine; and we are making plans to close as rehabilitated several of the persons seen in "Operation Presidio." Transportation to El Paso and Odessa for treatment and follow-up has been paid for those who could not afford these expenses themselves. We have been to their homes for planning, counseling, and guidance. The required general physical examinations were done in the hometown areas by each client's own family doctor. As far as possible we have tried to complete diagnostics and services in the client's hometown area.

Today, because of these projects, hundreds of people are aware of the services of the agency; and of these many have been and are being served in good, complete programs of vocational rehabilitation, sight preservation, and sight restoration.

Screening done in church

Summing Up

At present, only a few back issues of the *New Outlook for the Blind* are available for purchase. The supply of issues before 1966 was accidentally destroyed recently and several issues published in the last five years are out of print. The Migel Memorial Library of the American Foundation for the Blind does have a complete set of bound copies for reference use and xerographic copies of individual articles, issues, or volumes may be purchased at the rate of 10 cents per page. The *New Outlook* is not as yet available on microfilm, but this is now being investigated. Contributions of back issues would be welcomed; postage will be reimbursed.

Coordination of Casework—Rehabilitation Teaching Services

No single agency can possibly encompass the whole gamut of service to blind persons, so that it goes without saying that the needs of these persons demand a high level of coordination and integration. All of us at times become frustrated when we feel we are unable to meet a pressing need. It may be due to the lack of available resources, or it may fall outside of our individual realm of competence or function. When this occurs, we must examine our own attitudes and emotional involvement. We must give careful thought to the priority of need in terms of our agency structure and function. What is our attitude toward the blind? Do we see them as individuals with individual problems and prospects? Or, do we concentrate all our attention and energies on the disability of blindness, because with many, the disability may tend to obscure the total personality configuration? What is our focus? To palliate the effects of the disability or to assist the individual blind person to find a more meaningful way of life? What one blind person accepts and finds helpful, such as a cane and instruction in its proper use, may outrage another. A talking book machine for an elderly person crippled with arthritis and unable to continue her regular church attendance, may be an exciting and rewarding experience because it can restore her sorely missed daily Bible reading. For a blind housewife, learning to dial a telephone may be a turning point. From there she enthusiastically goes on to cooking, sewing, mending her family's articles of torn clothing, etc. Trimming the shrubs in front of the house may be a major accomplishment, but if the wife is overprotective and fearful that her husband may harm himself using the hedge clippers, it can be a devastating experience. His use of new skills, learned under the guidance of the rehabilitation teacher, could be thwarted unless the social worker can help the wife to understand and accept the rehabilitation process. Both professions may well play key roles in preserving and strengthening the marital relationship.

□ In discussing the coordination of casework and rehabilitation teaching, we must begin with a working definition and delineation of function. To quote from the *COMSTAC Report*,¹ "Social services, which include many direct professional services to individuals, families, and groups, cover a broad range of basic needs common to all people" (p.311); "... the focus in social work with visually handicapped persons is not on blindness but on the person who happens to be blind, on his family and community relationships, on problems which have emerged because of loss of vision or which may have existed prior to visual difficulties. Social work is a profession directed toward the

This paper was originally delivered as a speech before the Annual Conference of the American Association of Workers for the Blind held in Chicago, July 1969.

MILDRED F. STERN, A.C.S.W.

Mrs. Stern is social service consultant at the Metropolitan Society for the Blind, Detroit.

What is our focus?

Definitions

identification and modification of social, psychological, and environmental factors which affect the functioning of individuals and their families" (p. 317). In our agency, intake, preliminary diagnostic counseling, problems of finances, housing, health, recreation, and family attitudes are handled by the social worker.

"Rehabilitation teaching may be defined as training and guiding persons through a course of instruction designed to help them carry out daily activities without the sense of sight. It encompasses specific and identifiable teaching techniques and skills to assist the blind and visually handicapped in developing independence, manual dexterity, skills in communication, home orientation, home management, and personal management. Resting on the base of knowledge, values, attitudes, and skills common to all teaching, rehabilitation teaching also requires an understanding of the nature and problems incident to blindness or diminution of vision" (p.323). "Rehabilitation teaching functions are performed by professional teaching staff" (p.324). Our teachers instruct clients in learning new skills where old ones are no longer adequate. They assist the learning process with every known educational technique, instructing by direct information, interpretation, and demonstration, using necessary aids and appliances where indicated.

Under an established procedure at the Metropolitan Society for the Blind, a blind person's first contact with our agency is with the Social Service Department. The social worker arranges an appointment for a personal interview either at the person's residence or in the agency office. An intake interview is conducted, an evaluation of the presenting problems including subtle complexities is made, and recommendations are presented regarding services to be rendered. This includes the needs of the whole person, as well as the concerns of the family members, as they relate to the total situation. An eye report and medical information are obtained to determine legal blindness and activities to be avoided and for a better understanding of the blind person for purposes of rehabilitation. Before or concurrent with the utilization of community resources, rehabilitation teaching is provided if recommended by the social worker. The intake process may require several interviews and many consultations with other agencies in the community in order to resolve some immediate pressing problems.

□ Because the social worker is concerned with the blind person as a total personality, the core of interest is the person, not his blindness, and the potentialities of the individual are more important than the problems of his handicap. To this end, the social worker tries to help the client develop to his full potential. In many instances the blind person's contact with the social worker is his first contact with any social agency. It is amazing how many people are totally unaware of community social services. Many parents of congenitally blind children have no knowledge of where to go for guidance and help. Physicians, who are usually the first to see the child and his parents, are just beginning to utilize the referral process. And so, after considerable anxiety, worry, and emotional upheaval, the parents may hear about the agency through a radio or television spot announcement, a neighbor, etc.

First contact with the agency

Concerns of the Social Worker

Referrals to the agency

Elderly persons, whose vision has been slowly deteriorating, may be living on a very minimal Social Security check, barely able to make ends meet. Then a clinic physician tells them, "to get a cane" to avoid difficulties in traveling in heavy traffic, attempting to cross busy intersections, etc. When seen by the social worker, it is learned that they had no knowledge that, in many instances, they could obtain financial supplementation from one of the public assistance programs. The cane may or may not be indicated. It is the social worker's responsibility: 1) to ascertain financial, health, housing, recreational, and emotional needs and try to assist in finding a resource to meet these needs; and 2) to offer the specialized services of the agency that are unique to blindness, such as rehabilitation teaching for training in activities of daily living, techniques of communication, and other compensatory skills important in personal adjustment. The blind person decides, in collaboration with the social worker, what help he wishes to have made available and the degree to which he chooses to participate.

□ It might be said that home teachers have been providing such services as counselling, communication skills, talking book service, assistance in obtaining financial aid or health care, environmental manipulation, etc. Why then are some of these functions now considered to be outside the realm of the teacher? It is understandable if this seems to be confusing. This has come about because home teachers were the first group to provide service to blind adults in their homes. The profession, which is very young, has grown. The pioneer days are behind us and the profession is beginning to mature. Educational standards have been raised, job descriptions have been clarified, and the role of the teacher has become more definitive. None of us, social workers or teachers, should try to be all things to all people. Even though a social worker could probably help with homemaking skills or typing and a teacher could deal with a difficult environmental problem, these functions should be handled by the one who has the competence by virtue of specific professional training. Severe emotional problems, complex family situations, and problems of child care should be treated by qualified social workers, just as teaching personal management, braille, typing, etc. are the responsibility of the teacher. The title "home teacher" has recently been changed to "rehabilitation teacher" to emphasize the teaching components.

Doris P. Sausser³ has written that "... rehabilitation of the adult blind is a joint endeavor of a multi-discipline team, of which the home teacher is a very important team member with a specific contribution to make" (p. 183). She goes on to say that home teaching "... is related to education and not to social casework, group work, or vocational guidance. These other services are needed, but should be provided by other qualified staff members, by other community agencies ..." (p. 184). Ruth Kaarlela² has described home teaching as "therapeutically oriented education" (p. 81).

Following the initial contact, the social worker evaluates the total situation, records the intake interview, and makes recommendations for his service. Eye and medical reports are obtained and when indicated the social worker, through a designated process, refers the case for rehabilitation teach-

The Rehabilitation Teacher

The team approach

From the social worker to the teacher

ing. The director of the coordinated department assigns the case to a specific teacher. Each profession has its own area of competency, so when the social worker makes the referral, the designated teaching areas are suggestions based on initial observations and the client's expressed wish. It is the teacher's prerogative and responsibility to make his own evaluation and diagnosis. He is educationally prepared to teach the blind person communication skills, such as braille, typing, handwriting; and homemaking skills involved in the activities of daily living, personal care, home orientation, and handicrafts.

The social worker's diagnosis is concerned with the intra-psychic, intra-familial aspects as well as dealing with crisis situations such as financial deprivation, health problems, etc. The rehabilitation teacher's diagnosis is concerned with the blind person's desire to learn a skill, ability to comprehend and carry out a suggested course of lessons, his limitations, and his maximum potential for independence. Also taken into consideration are the satisfaction or lack of same that he derives from his ability to accomplish a task. The blind person may have only verbalized his motivation to the social worker during the intake process. The teacher is in the best position to assess this as he and the blind person are involved in the learning process. The teacher may find that the blind person is eager to learn and readily puts into practice his newly acquired skills. Another client may be content with a very limited acquisition of skills but enjoys the teacher's visit, because, "he has someone to talk to." The role of each profession should be a clearly defined one, with each contributing to the better understanding of the blind person's needs and expectations. Rehabilitation is the goal of each but the differences lie in the methods which each profession uses to perform its function and attain its goal.

□ There are many situations in which the primary service seems to be that of rehabilitation teaching. The social worker has helped the client to sort out issues in order to clarify his problems and conflicts, referred him to appropriate community resources, and acted as an enabler so that he is free to make decisions. He is then ready and desirous of rehabilitation teaching and the referral is made. The case becomes inactive in social service and the teacher assumes responsibility. The client makes excellent progress and develops confidence in his abilities; the case is then suspended at the appropriate time.

Miss M., an 18-year-old young woman, became totally blind in a fire. She was referred to us by a family social agency in the community, but we could offer little assistance initially because of medical problems resulting from second degree burns on her arms and other parts of her body. When these cleared up, however, she was extremely self-conscious about the severe scars and refused to come out of her house. Following a few contacts with the social worker who helped her to consider the rehabilitation process more positively, she was referred to a rehabilitation teacher. She responded with interest and enthusiasm to help in personal grooming and the selection of appropriate wearing apparel. She progressed to learning braille, activities of daily living, and sewing. She then began to think about a vocational goal. The social worker referred her to the state rehabilitation agency which suggested that placement

Separate roles and responsibilities

Case Histories

Miss M., 18 years old

in a residential rehabilitation center away from home would be beneficial for her and promote her eventual emancipation from an intolerable home situation. In this case, the teacher with whom she had excellent rapport was the enabler in helping her to prepare for her move to the center. Miss M. was self-assured, able to verbalize her anxieties about her impending new situation in a realistic manner, and showed an amazing degree of independence in her thinking and planning. None of this could have been accomplished without the direct assistance and emotional support of the teacher. She initiated each teaching step *with* Miss M. rather than *for* her.

There are times when the social worker must assume and maintain major responsibility, providing necessary casework services until such time as the client or family attitudes are modified and the factors that have interfered with the client's ability to function have been dealt with. Rehabilitation teaching in such a situation may not be indicated or it may be necessary only at a later date.

The social worker and teacher can also be concurrently involved. For example, a middle-aged blind housewife who was extremely desirous of independent functioning progresses admirably in learning skills. Her husband, fearful that she might burn herself if she cooks, insists that their 18-year-old daughter remain home to help her. Mrs. R. feels that their daughter should be allowed to lead her own life. When this problem became apparent to the teacher, it was referred to social service. Both professions are involved in the case concurrently—each with a specific function. The social worker's goal is to better understand the family attitudes and feelings and, through casework, to attempt to resolve the difficulties. The teacher continues in her teaching role of helping Mrs. R. to realize greater skill and independent functioning.

Middle-aged housewife

On the other hand, at the time of the initial intake, a client may be so anxious for rehabilitation teaching services, that the problems in the home situation are obscured. This occurred with Mrs. B., a 19-year-old newly blinded woman for whom rehabilitation teaching was immediately imperative. She made excellent strides until one day she became emotionally distraught. The teacher learned that Mrs. B's husband was to report shortly for Army Reserve duty, leaving Mrs. B. alone for several weeks to cope with many doctor's appointments and the indicated medical treatment. The exploration of this problem and ways of dealing with it is the function of the social worker. The teacher referred the case with the hope that the family situation could be resolved. The teacher will continue to render teaching service relative to activities of daily living, personal adjustment, and some communication skills. The social worker will offer the necessary casework service.

Mrs. B., 19 years old

□ Both professions, social casework and rehabilitation teaching, are essential if we are to meet the needs of blind persons and help them realize and develop their potential. Both professions are separate, well-defined disciplines. I cannot conceive of service to the blind person without the team approach which we strive to achieve in Detroit.

Cooperation, Not Possessiveness

Utilization and coordination of the skills of both professions calls for maturity, judgment, and diagnostic thinking. There is no room for possessive-

ness. Individually, none of us can meet all needs. Both professions must utilize all of our skills and apply creative imagination to the process of planning and implementing services.

1. *The COMSTAC Report: Standards for Strengthened Services*, edited by Frances A. Koestler. New York: Commission on Standards and Accreditation of Services for the Blind, 1966.
2. Kaarlela, Ruth. "Home Teaching—A Description," *New Outlook for the Blind* 60(1966):80-83.
3. Sausser, Doris O. "The Role of the Rehabilitation Teacher—A National Point of View," *New Outlook for the Blind* 61(1967):181-84.

References

Books That Make Scents

Have you ever read a description of something with a distinctive odor that was so well written that you could almost smell it. Through the use of a new process called microencapsulation you may be able to do just that—even if the description is not all that good. This process, which can now be used in the production of books, makes it possible to add scents (among other things) to the surface of paper. Originally developed for the medical and pharmaceutical fields, microencapsulation allows fragrances to be captured within bubbles that range in size from 10 to 2,000 microns (25 microns equals about one-thousandth of an inch). The scent is released only when pressure is applied and the bubbles are broken. The success of the process lies in the fact that only a few of the bubbles are broken at a time and, therefore, more scent is available at a later time. Earlier attempts to add fragrances to books have failed because scents mixed with the ink or sprayed on the page almost completely evaporate within a very short time.

□ Two companies, the Minnesota Mining and Manufacturing Company and the National Cash Register Company, have recently begun to make such substances in forms that can be used in books. The 3M Company is making adhesive-backed fragrance strips ("Microfragrance"), while NCR has a clear, invisible coating ("Micro-scent") that can be applied directly to the page. Golden Press (an imprint of Western Publishing Company, Inc.), using die-cut strips from 3M, has recently published *The Sweet Smells of Christmas* to launch its new "Golden Fragrance Books" series for children. This book, written by Patricia Scarry and illustrated by J. P. Miller, presents six different scents: pine, candy cane, orange, hot chocolate, gingerbread, and apple pie.

3M and NCR

Although the use of this process is somewhat of a gimmick at present, it would seem to have possibilities for use in the education of blind and visually handicapped children and other groups.

White House Conference on Aging

Chairmen of the 14 technical committees for the 1971 White House Conference on Aging were recently announced by John B. Martin, special assistant to the President for the aging and director of the Conference. Members of the committees were to be announced at a later date.

□ "The 14 chairmen," said Mr. Martin, "are distinguished experts in the field of aging. The background papers that they and their committees prepare will pinpoint issues on the problems that concern older people. The papers will serve as guidelines for the deliberations across the nation next year [1971] at community, state, and national levels. Out of these deliberations will come the recommendations and plans for action requested by the President and the Congress—and, we hope, the more realistic and more comprehensive national policy on aging that all of us are seeking."

These papers will be used first as a basis for deliberations in more than 500 community White House conferences during the early months of 1971, then for the state White House conferences in May and June. Revised papers that include the recommendations of these conferences will go to the delegates of the national Conference when it meets in Washington, D.C., from November 29 to December 3, 1971.

□ Nine of the 14 chairmen are heading committees that will deal with "needs areas" for older Americans: *Income*: Roger F. Murray, New York City; economist and vice president of Teachers Insurance and Annuity Association and College Retirement Equities Fund. *Health*: Edward J. Lorenze, M.D., White Plains, New York; medical director, Burke Rehabilitation Center; former president, American Geriatrics Society. *Nutrition*: Donald M. Watkin, M.D., Wellesley Hills, Massachusetts; staff physician, Veterans Administration Hospital, West Roxbury, Massachusetts; vice chairman of the Panel on Aging for the 1961 White House Conference on Food, Nutrition, and Health. *Transportation*: Thomas C. Morrill, Bloomington, Illinois; vice president, State Farm Mutual Automotive Insurance Company. *Employment and Retirement*: A. Webb Hale, Los Angeles; director, Recreation Center, Space Division, North American Rockwell Corporation, Downey, California. *Education*: John W. McConnell, Ph.D., Durham, New Hampshire; president, University of New Hampshire. *Retirement Roles and Activities*: Walter C. McKain, Ph.D., Storrs, Connecticut; professor of sociology, University of Connecticut. *Spiritual Well-Being*: Hess T. Sears, Des Moines; secretary, Equitable Life Insurance Company of Iowa.

□ The other five chairmen head committees on "needs-meeting mechanisms"—ways of meeting the needs of older people: *Facilities, Programs, and Services*: George K. Wyman, Loudonville, New York; commissioner, New York State Department of Social Welfare; vice chairman, National Council of State Welfare Administrators. *Planning*: William Rutherford, Peoria, Illinois; admin-

Committee Chairmen Are Distinguished Experts

Committees on "Needs Areas"

Committees on "Needs-Meeting Mechanisms"

istrative vice president, Forest Park Foundation; chairman, Illinois State Council on Economic and Social Problems of Older People. *Research and Demonstration*: Alfred H. Lawton, Ph.D., St. Petersburg, Florida; assistant dean of academic affairs, University of South Florida, Tampa. *Training*: George G. Reader, M.D., Rye, New York; professor of medicine, New York Hospital-Cornell Medical Center, New York City. *Government and Non-Government Organizations*: Fred Cottrell, Ph.D., Oxford, Ohio; chairman, Department of Sociology, Miami University, Ohio.

New Plastic Lens Saves Damaged Eyes

A new plastic lens, somewhat like a contact lens, has been developed which can save eyes that have been damaged by burns or ulcers. According to an article in the medical news section of the November 2 issue of the *Journal of the American Medical Association*, Loren B. Morgan, M.D., first made the lens out of plastic while on his third trip to Vietnam in the AMA's Volunteer Physicians program.

Dr. Morgan, an ophthalmologist in Wyoming, recently told a meeting of the Contact Lens Association of Ophthalmologists that the lens not only protects the injured or infected eye from the eyelids (which can sometimes become attached to the eyeball), but that it also allows the eye to be bathed continuously with liquid medication to wash out dead cells, bacteria, and other debris. The bathing is accomplished via a tiny tube, one end of which is attached to a hole in the lens, the other to a syringe or bottle. Pain in the eye disappears within two or three hours after the lens is placed in the eye.

The lens, which is made of clear plastic, allows a physician to examine the eye while the lens is in place. "This procedure is unlike patching the eye," Dr. Morgan said. "The patch just acts like an incubator for bacteria. We allow the eye to get well by itself." He further reported that the lens has been used to treat ulcers of the eye; alkali, acid, and gunpowder burns; and an advanced case of glaucoma. The lens is also useful in cleansing the eye before surgery and for removing simple foreign bodies from the eye.

Editorial Notes



In this issue of the *New Outlook for the Blind*, our readers will note that there is a letter to the editor (see below) which is the reaction of one thoughtful professional in our field to an article which we published last spring. There is nothing new in this, since the American Foundation for the Blind, as the publisher of the *New Outlook*, has tried for many years to provide the field with an objective forum for discussion and debate.

In this particular instance, however, we have found that perhaps we have not been sufficiently clear about how this magazine can handle this process of

discussion and/or controversy through the printed word. Somewhere along the line of our contacts with an individual who wished to critically review the article in question, the word "rebuttal" was used in informal exchanges.

Those of us who must manage the *New Outlook* would like to hear your opinions. For the moment, however, we are taking the position that we are not "a debating society." If a particular professional dissertation attracts the critical interest of the author's peers, we suggest that such a commentary should not be in the form of a letter to the editor.

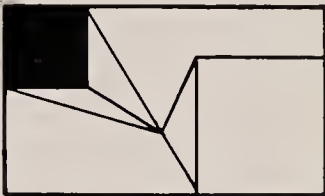
Rather, we would welcome that individual's own professional paper dealing with the same topic.

Letters to the editor are certainly welcome, but please, please keep them short. This in itself means that one cannot use the "Letters to the Editor" column for a professional dissertation.

Since this is appearing in our January issue, may the editors and the printers and even the Foundation's trustees wish for all of you an exceedingly Happy New Year.

—M.R.B.

Letters to the Editor



Dear Editor:

Most educationally oriented fields desire to know whether a potential subject has a minimal background in order to be successful in a planned training program. The field of orientation and mobility is one of the fields. The literature contains a small number of articles dealing with "readiness" for orientation and mobility. Among these is "Research on Criteria for Measuring Mobility Readiness of Adventitiously Blinded Adults," by William E. Patton, published in the March, 1970, issue of *The New Outlook for the Blind*. Mr. Patton's article reports to the reader

that "Fourteen criteria were found to have a positive relationship to both the readiness scores and the actual subsequent performance score." I am writing to question his conclusion. This study, as presented to the field, was deficient in my opinion in several aspects.

This writer's analysis will deal with the aforementioned article in three phases: (1) the area of experimental design; (2) the area of data collection and (3) the utilization of and the interpretation of the statistical analyses.

(1.) Experimental Design: The study is *ex post facto* in design, implying a lack

of experimental control over the variables since they exist only in situation. These reported data were literally "created" at the end of Grant RD-1693-S and were neither a part of a true experimental design nor the grant plan. A correlation study is not considered to be one of the stronger statistical tools available to a researcher, for it is possible to pair the most disparate pair of variables and grind out correspondingly questionable values of a correlation coefficient.

Another factor to be considered when assessing the relevance of a correlation study is the principle of multiple causa-

tion. One must be reasonably sure that an expected association exists essentially by itself and is not the result of some other latent factor or factors. Correlation can be affected by unreported extraneous variables. In addition, correlation is a necessary but not a sufficient condition for "cause" and it must be remembered that correlation does not imply causation.

(2.) Data Collection: Data collection concerning readiness can be confounded in several areas as all subjective measures can be. Patton utilized 14 criteria as variables. In essence, a five-point ranking scale was utilized (exceptional/above average / average / below average / fairly poor) to rate each variable. In five-point scales such as these, a three-point scale could be more effective since the extreme high and low scores would tend to be assigned less frequently than they might be because of the psychological reactions to the words utilized in this particular study.

Patton relates that most of his criteria could be rated objectively. I do not agree. Of the 14 criteria, only 2 (hearing and intelligence) could possibly be related objectively, again, in my opinion. The author related that in the case of hearing, a rating was assigned "when possible from a medical report or audiogram." An audiogram would be an objective measure while a rating from a medical report would obviously be subjective. In most cases reported (rating from a medical report), Patton does not tell the reader how a rating was assigned. In the case of intelligence, he related that intelligence "when possible was related from a psychometric examination." Thus the reader of the report might assume that this "psychometric examination" is a single psychological instrument and not the several different instruments that were actually utilized. In the cases that a quantifiable score could not be utilized, he omits a description of how a rating was

assigned. Patton also presents a table (Table 1) showing how an arbitrary average rating was selected. The arbitrary average is acceptable but, I suggest, could have been utilized more effectively in a three-point rating scale, e.g. (below average/ average/ above average).

Of the $N=61$, six were reported as having their orientation and mobility scores adjusted, thus changing an important variable. These six subjects could have been dropped from consideration and quite probably would not have affected the results of the study significantly. The orientation and mobility scale used was changed in the middle of the grant period from a five-point to a three-point rating scale. It was reported that z scores were assigned as the measure of orientation and mobility performance. However, it is not customary to use z transformations on ranked data. The five-point scale could have been (as mentioned previously) changed to a three-point scale more validly than the reported z transformations. Also, if ratings are used as criteria, one finds that the ratings then would be unreliable because of the nature of the trait rated, lack of knowledge of the rates by the judges, and a multitude of other possible errors associated with ratings.

(3.) The Utilization of and the Interpretation of the Statistical Analyses: It was reported that validity coefficients of 0.49 and 0.54 were calculated between the readiness and performance scores. This is not surprising since most validity coefficients fall between 0.40 and 0.60 with a median around 0.50. For the validity coefficient of 0.49, a k of 0.87 is calculated meaning that an index of forecasting efficiency of 13 percent is obtained. For the validity coefficient of 0.54, a k of 0.84 is calculated meaning that an index of forecasting efficiency of only 16 percent is obtained. Even if the reported validity coefficients were "true" and correct,

the implication of these may be considered minimal when the work of gathering data on a cost effective basis is considered. In addition, and more importantly, the elementary, obvious, and logical step after computing a validity coefficient is to set up a regression equation for the data so that meaningful predictions can be made for other individuals. This was not reported because it was not done as it should have been.

Patton's table of eta (Table 2) and his subsequent inferences also strike me as subject to serious question. He did not perform a test of significance on each eta.

Additionally his statement "That 14 criteria were found to have a positive relationship to both the readiness score and the subsequent actual performance score" is the most suspect statement in his paper. For the mathematics of eta can *only* yield an algebraic sign that is *always* positive and *never* negative. Consequently, it must only be considered as an index of the *closeness* of the relationship between two variables, and *not* as an *index of the direction* of the relationship as Patton reports. His statement of a "positive relationship" could actually all be negative relationships. This would have implications other than he presented. His reported "results" simply cannot be held tenable.

In summary, Patton in my opinion, incorrectly reports that the "... research study appears to relate to readiness for mobility service. Although the relationship between the resulting research instrument and performance does suggest its usefulness in assessing readiness, further research is indicated." It should be suggested, however, that further research be done in this area and that a more correct utilization and interpretation of statistical analyses is indicated.

David L. McGowan, C.A.G.S.
Southington, Connecticut

Dear Editor:

I have just begun reading the October 1970 issue of the *New Outlook*, a magazine which I usually read from cover to cover when time permits. I would like to take this opportunity to commend you on your publication and also to call your attention to several misstatements that I noted in the article "Teaching the Concept of the Diagonal During Handwriting Lessons for the Congenitally Blind" by Jane G. Wheeler.

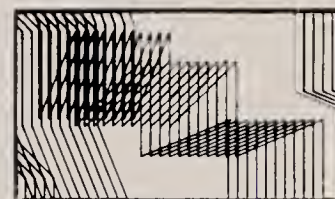
On page 253, under Section III, Lesson 3, Part A. Two Separate Components, the two exercises read, "1. Draw a horizontal line from dot 1 to dot 2; draw a vertical line from dot 2 to dot 5, or 2. Draw a vertical line from dot 1 to dot 4; draw a horizontal line from dot 4 to dot 5." In both, the designations of kinds of lines are reversed, that is, the statements should read *vertical* from 1 to 2, *horizontal* from 2 to 5 and *horizontal* from 1 to 4, *vertical* from 4 to 5.

I trust this is not too presumptuous of me to write you in this regard. Frankly, I completely support Miss Wheeler's use of the braille cell. I am an orientation and mobility specialist and I have used the braille cell many, many times for teaching similar concepts. I would enjoy hearing from you as to any other responses on this particular article.

Donald Earl McKee
Pasadena, California

Answers to Accreditation Questions

NATIONAL ACCREDITATION COUNCIL FOR AGENCIES SERVING THE BLIND AND VISUALLY HANDICAPPED



Q. We've been looking over the Self-Study and Evaluation Guide and we wonder why we should have to bother with "Section F, Evaluation Summary and Report." Don't the answers in the other parts take care of this?

A. On the contrary, "Section F" is your chance to set forth your administrative judgment of what you should do now and in the future to improve your operations—including what you have already started to do as a result of your self-study.

"Section F" breaks down into three parts: what improvements you're making now; what you expect to complete in a relatively short time, perhaps a year; and what you feel are long-range goals.

As an administrator, you know the importance of having a grasp of the total situation. You also know that the world's best agency or school can become even better. "Section F" is your opportunity to show how you apply these concepts to your operations.

Q. We don't think the Self-Study and Evaluation Guide covers exactly what our agency does. What shall we do?

A. Use as much of the *Guide* as does apply. If a standard seems to apply in part but not wholly, add brief comments on how your program differs and give your evaluation of the program as it is. If a portion does not apply at all, say so.

If you have programs that do not appear to be covered by the standards, add additional sheets describing these programs and giving your evaluation of them. These statements need not be as detailed as those asked for in the *Guide* itself.

The *Guide* is not meant to be a rigid mold into which your agency's program must be poured. It is a flexible instrument to assist you in evaluating what you are doing.

Q. I agreed a year ago to serve on an on-site review team if asked. No one yet has asked me to serve. Why? Am I really needed?

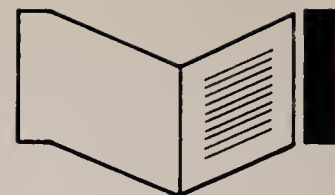
A. Yes, you are needed. Many factors enter into the selection of a given on-site review team. Geography is one of them; so is the nature of the services to be reviewed; and the time of year that you said you could serve is another.

When all these factors are taken into

consideration it naturally works out that some people will not be called on to serve as soon as they might expect. The National Accreditation Council cannot tell in advance what agencies or schools will be ready for accreditation at any given time. In fact, until we have seen the agency self-study, we cannot be sure just what elements must be covered by the team. Therefore, we must always have an ample number of qualified potential team members in reserve.

Everyone on the roster of persons willing to serve on on-site teams receives regular mailings from NAC. These mailings are intended to keep you abreast of what is happening in accreditation and to remind you that you are not forgotten—you are a very important part of the program to improve services to blind and visually handicapped persons.

What is your question about accreditation? Send it to the National Accreditation Council, Suite 1406, 79 Madison Avenue, New York, N.Y. 10016. If it is of general interest, we will try to answer it in this column, but you will in any case receive a direct, prompt reply.



A History of Mobility, by John A. S. Shaw. *The New Beacon* (Royal National Institute for the Blind, 224 Great Portland Street, London W1N 6AA, England), Vol. 56, No. 640, August 1970, pp. 198-203. A 50-item bibliography is added to this short history of mobility for the blind.

The Ideal Profession. *St. Dunstan's Review* (191 Old Marylebone Road, London, N.W. 1, England), Vol. 56, No. 608, May 1970, pp. 2, 19-24. The story of St. Dunstan's role in promoting physiotherapy as a career for the blind.

Centers & Services for Deaf-Blind Children, by Robert Dantona. *Hearing & Speech News* (National Association of Hearing and Speech Agencies, 919 18th Street, N.W., Washington, D. C. 20006), Vol. 38, No. 4, July-August 1970, pp. 12-13. The author is the coordinator of Centers for Deaf-Blind Children, Bureau of Education for the Handicapped, U. S. Office of Education.

Eye Injuries Due to Fireworks; Results of 1969 Survey, by Elizabeth MacFarlane Hatfield. *The Sight-Saving Review* (National Society for the Prevention of Blindness, Inc., 79 Madison Avenue, New York, N.Y. 10016), Vol. 40, No. 2, Summer 1970, pp. 93-99. Survey was conducted jointly by the National Society for the Prevention of Blindness, the National Fire Protection Association, and the Fire Marshals Association of North America.

Eye Injuries and the Solar Eclipse; Results of a Survey, by Elizabeth MacFarlane Hatfield. *The Sight-Saving Review* (see address above), Vol. 40, No. 2, Summer 1970, pp. 79-85. An evaluation of the effectiveness of the public information program in preventing eye damage.

New Helps for the Handicapped, by Dorothea H. Barton. *Harvest Years* (104 East 40th Street, New York, N. Y. 10016),

Vol. 10, No. 9, September 1970, pp. 37-41. The author, who is visually handicapped, suggests methods and devices that make daily tasks easier for the blind and the physically disabled.

—M.M.R.

Additional Listings

The first issue of a new magazine, **Stride**, was published in September by the American Council of the Blind of Maryland. To appear five times per year, the magazine carries original articles on developments of all kinds that affect the blind, plus news, reviews, and an opinion column called "Sound Off." The editor is Robert M. Harmon. Subscriptions are \$2.00 per year. All correspondence should be sent to ACB of Maryland, 20 E Street, N.W., Washington, D.C. 20001.

Mealtime Manual for the Aged and Handicapped. Institute of Rehabilitation Medicine. Information on how to make kitchens workable and meal preparation easier. Hardcover edition, \$5.95; spiral-bound softcover, \$2.00. For further information, contact Essandess Special Editions, Simon and Schuster, Inc., Rockefeller Center, 630 Fifth Avenue, New York, N.Y. 10020.

A Survey of Reader Characteristics, Reading Interests, and Equipment Preferences: A Study of Circulation Systems in Selected Regional Libraries, Nelson Associates, Inc. (845 Third Avenue, New York, N.Y. 10011). 1969.

An Introduction to Braille Music Transcription, by Mary Turner De Garmo. Music Services Unit, Division for the Blind and Physically Handicapped (Library of Congress, Washington, D.C. 20542). Although the primary purpose of the book is to train transcribers, it is also de-

signed to give resource teachers, parents, and others a more fundamental understanding of the braille music code.

Better Education for Handicapped Children, Annual Report Fiscal Year 1969—Aid to State and Local Schools, Bureau of Education for the Handicapped, Aid to States Branch (U.S. Office of Education, Washington, D.C. 20202). A report summarizing (with statistical details) the educational accomplishments under Public Law 89-313, an amendment to Title I of the Elementary and Secondary Education Act of 1965, and Title VI-A of the same act.

Resources in Home Economics for the Blind Homemaker, by Verda M. Dale and Susan J. Uhlinger. Amherst, Massachusetts: Massachusetts Home Economics Association, 1969. ii + 23p. 50c (Address requests to Dr. Verda M. Dale, Skinner Hall, University of Massachusetts, Amherst, Massachusetts 01002.) A bibliography of resources available in print, braille, tape and disc recordings, and large print on subjects such as child development and family relations, home management, textiles, etiquette, money management, nutrition and health, diabetes, cookbooks, and general reference material. Also available from the same source in a braille edition at \$2.00 a copy.

Standards for Production of Reading Materials for the Blind and Visually Handicapped, National Accreditation Council for Agencies Serving the Blind and Visually Handicapped (79 Madison Avenue, Suite 1406, New York, N.Y. 10016), 1970. 80p. \$1.50. These standards, which have been in preparation for two years, include basic guidelines for producers of large print, recorded, and braille materials, plus general principles and policies which should guide production in each medium.



■ The Delta Gamma Foundation is offering summer scholarships for the training of orthoptists and teachers and consultants for visually handicapped children. Applicants are considered on individual merit and the amount of each grant depends on the cost of the specific training involved. The deadline for applications is April 1. Application blanks and further information may be obtained by writing to Mrs. David Dunbar, 20 Elm Court, Anderson, Indiana 46011.

■ Under new regulations proposed by the U.S. Food and Drug Administration, it will soon be required that all eyeglass lenses be made of heat-tempered, impact resistant glass, laminated glass, or plastic. It is hoped that once these regulations are fully implemented, many thousands of accidental eye injuries will be prevented.

■ Carl E. Olsen, director of Lighthouse Industries, Long Island City, New York (a division of the New York Association for the Blind), retires from that post on January 1, 1971. A leading figure in the improvement of employment opportunities for blind persons for more than 25 years, Mr. Olsen is continuing his activity after retirement as a consultant to workshops for the U.S. Department of Health, Education, and Welfare. Martin P. Strahs, general manager of Lighthouse Industries, will succeed Mr. Olsen as director.

■ The Vocational Rehabilitation Center of Allegheny County in Pittsburgh was recently awarded a grant by the U.S. Department of Health, Education, and Welfare to increase the effectiveness of the Center's evaluation and work adjustment services to blind and visually handicapped persons. Richard O'Hara is the coordinator for this project which is receiving local matching funds from the Community Chest of Allegheny County.

■ Last September, the South Carolina Commission for the Blind, Columbia, was officially presented with a collection of some 40,000 textbooks on disc recordings. The gift was made by Recording for the Blind, Inc., New York City, the leading supplier of recorded texts for blind students. RFB has recently converted its entire operation to tape recordings. The disc recordings will be made available on free loan to qualified residents of South Carolina.

■ Beginning this past September, the University of Northern Colorado, Greeley, is offering a master's level training program for teachers of the visually handicapped. The program is specifically designed to prepare teachers of visually handicapped children to work in sparsely populated areas such as are found in Colorado and surrounding states. The curriculum includes full and equal training both in academic teaching and in orientation and mobility instruction. The project is being funded under P.L. 91-230 through the U.S. Office of Education, Bureau of Education for the Handicapped.

■ Kentucky Volunteers for the Blind, Inc., Frankfort, a group providing recorded textbooks and other educational materials for blind students attending regular schools in their communities, has begun producing *Monthly Medical Review for the Blind*. Issued on one tape cassette, it is made up of medical news articles reproduced from current magazines and is distributed to interested clients. Further information is available from Kentucky Volunteers for the Blind, P.O. Box 541, Frankfort, Kentucky 40601.

■ According to its 1969-1970 annual report, Recording for the Blind, New York City, circulated 40,007 recorded books to 7,841 borrowers last year, or 85 percent of all blind college students and 54.6

percent of all blind high school students. RFB now has more than 4,000 volunteers recording books in 23 recording studios around the country.

■ The Cincinnati Association for the Blind was honored last September by the Ohio Rehabilitation Association which chose it as the winner of the "Outstanding Rehabilitation Facility Award."

■ The New York Association for the Blind, New York City, has decided to close its school of piano technology at the end of February 1971.

■ The Matchmaker, a new pen pal club for handicapped people, is being organized by G. W. Williams. Further information may be obtained by writing to the Matchmaker, P.O. Box 1091, Del Rio, Texas 78840.

■ The Downeast Recording Library for the Blind, Portland, Maine, has recently undertaken a special project, a series of recordings about Maine, by Maine authors, including books, articles, essays, and live interviews with people doing interesting things on the Maine scene. Donald W. Loveday is executive director of the Downeast Recording Library, which is on Campbell Street in Portland, Maine 04103.

■ Ellis J. Minatrea, a blind worker in the Lighthouse for the Blind, Dallas County Association for the Blind, Dallas, Texas, has received the Peter J. Salmon Award of the National Industries for the Blind, New York City. The award, which carries with it the title "National Blind Worker of the Year," is made annually to one of the "Blind Worker of the Year" award-winners chosen by each of the 81 workshops associated with NIB throughout the United States.

■ The Albany Association for the Blind has recently established a new, client-oriented, comprehensive Vocational Rehabilitation Center to offer services to blind and visually handicapped persons in upstate New York. This full-service program, which has resident facilities, offers diagnostic screening, pre-vocational, vocational, and on-the-job training, and job placement services. Specialized services include vocational counseling, social casework, communication skills, rehabilitation teaching, orientation and mobility training, psychological testing and counseling, home management skills, recreation, and medical consultation. The program was developed through the combined efforts of the Albany Association for the Blind, New York State Commission for the Blind and Visually Handicapped, and the U.S. Rehabilitation Services Administration.

■ Goodwill Industries of Dayton, Ohio, in an effort to improve the conceptualization of city life by congenitally blind persons, has commissioned a local artist, Holly Sweebe, to build a scale-model city. Called Touch Town, the model includes structures and topological features that are difficult to describe verbally and impossible to explore tactually in their totality: a row of houses, hills, an automobile service station, a park, a hotel, a factory. The model has been placed on display and is available for exhibition in the Dayton area.

■ Through a cooperative effort of the Publicity Department of the Illinois Constitutional Convention, the Illinois Secretary of State, and the Department of Children and Family Services, the visually handicapped citizens of Illinois were provided with recorded copies of the proposed state constitution that was to be considered by the voters in the election last November. Distributed by the Books for the Blind and Physically Handicapped Department, Chicago Public Library, the three flexible, soundsheet disc recordings included the entire new constitution (120 minutes) and could be retained by the individual.

■ The Institute for the Crippled and Disabled, New York City, is offering a series of courses and workshops to members of rehabilitation facilities throughout the United States and other parts of the world. The following are tentatively scheduled: March 1-3, Problem Clinic: Systematic Work Evaluation Techniques for the Mentally Handicapped and Educationally Disadvantaged; March 22-24, Three-Day Symposium: Psychological and Vocational Methods in the Rehabilitation of the Brain Damaged; April 12-14, Three-Day Orientation: Selection, Training, and Utilization of Support Personnel in Vocational Rehabilitation; April 26-May 14, Work Evaluation (Tower) Training: Course No. 49; May 24-26, Three Day Conference: Administrative Methods for Supervisors and Department Directors; June 14-16, Three-Day Seminar: Utilization of Innovative Research in Rehabilitation Facilities.

Individual letters are requested for each course from each applicant. Further information is available from the Supervisor of Professional Education, Institute for the Crippled and Disabled, 400 First Avenue, New York, New York 10010.

■ The ultrasonic binaural environment sensor developed by Dr. Leslie Kay, head of the Department of Electrical Engineering, University of Canterbury in New Zealand, has been brought to Boston College for extended testing and evaluation. The sonar-like device, which incorporates an ultrasonic transmitter and receiver in a pair of eyeglasses and a small pack worn on the body, was conceived by Dr. Kay in 1959 after his work on sonar systems for the New Zealand Royal Scientific Service. Consultants during the development of the device included acoustical engineers and scientists working with dolphins and bats.

The program at Boston College will be directed by Dr. Kay within the Department of Special Education. Working with him are Professor Donald Blasch, the director of the Institute of Blind Rehabilitation, Western Michigan University, and a team of engineers, mobility instructors, and psychologists from Canterbury Uni-

versity. The program is being financed by a \$99,000 grant from the Seeing Eye, Inc., Morristown, New Jersey.

After courses have been developed at Boston College and Western Michigan University, the program will be enlarged to include some 200 blind persons at various other rehabilitation centers around the country.

■ An advisory committee of the Center for Disease Control, U.S. Public Health Service, has reported that "rubella vaccine appears to be a highly effective immunizing agent and the first suitable method of controlling rubella." Rubella has been one of the leading causes of blindness in recent years. The report was based on the first year's experience with rubella vaccine, a year in which 19 million doses were distributed in the United States.

The advisory group, the Public Health Service Committee on Immunization Practices, repeated its advice of more than a year ago that the principal objective of rubella control should be to prevent infection of the fetus and thus prevent birth defects. The Atlanta-based Center for Disease Control is spearheading a national drive to vaccinate some 60 million children who are between one year of age and puberty. Grants totalling \$41 million have been awarded by the Health Services and Mental Health Administration to 73 state, territorial, and city-county rubella projects.

■ J. Marshall Parham, of Winston-Salem, North Carolina, rehabilitation supervisor and office manager in the North Carolina State Commission for the Blind Winston-Salem District, received the Elkin Award from the National Rehabilitation Association. The award, the highest honor for rehabilitation counseling, was presented to Mr. Parham at the NRA convention held last September in San Diego, California. Mr. Parham is reportedly the first blind person to win the Elkin Award.

■ Nominations for the 1971 Francis Joseph Campbell Award will be accepted until January 15, 1971. The award has

been given each year since 1966 "to a person who has made an outstanding contribution to the advancement of library service to blind persons." All nominations and correspondence should be sent to Miss Mona May Werner, Chairman, Campbell Awards Committee, Carnegie Library of Pittsburgh, Library for the Blind and Physically Handicapped, 4724 Baum Boulevard, Pittsburgh, Pennsylvania 15213.

Appointments

■ U.S. Office of Education, Bureau of Education for the Handicapped: Dr. Lois Elliott, chief, Project Centers Branch, Division of Educational Services; Gerald B. Boyd, educational specialist, Early Childhood Education Program, Project Centers Branch; Dr. Martin Kaufman, research coordinator, Projects and Program Research Branch, Division of Research; Laurence M. Lieberman, educational program specialist, Program Planning and Evaluation Staff, Office of the Associate Commissioner; Dr. Mario A. Pascale, coordinator, Unit on Crippled, Special Learning Problems Branch, Division of Training Programs; Dr. Donald Wares educational specialist (mental retardation), Division of Training Programs; Dr. Warren Aronson, head, Learning Disabilities Centers Program, Project Centers Branch; Dr. Henry Smith, state plan officer, New England Region, Aid to States Branch.

■ Maine Institution for the Blind, Portland: Robert P. Langford, Ph.D., executive director.

■ Medical Assistance Advisory Council, new members: Louis Rolnick, national director, Welfare and Health Benefits Department, International Ladies' Garment Workers Union; George K. Wyman, commissioner, New York State Commission on Social Services; Mrs. Audrey Davis, United Community Action Group, Milwaukee; Tully M. Friedman, New York City, a lawyer and advisor on problems of the inner city; Lee J. Podolin, executive director, Metropolitan Planning Cor-

poration, Cleveland; Edward V. Sparer, associate professor of law, University of Pennsylvania Law School, Philadelphia.

■ Center for the Blind, Philadelphia: Franz R. Dykstra, president; David M. LaCrosse, executive vice president-director of services; Evelyn Sue ("Sister Sue") Roth, ACSW, social service director.

■ Greater Pittsburgh Guild for the Blind, Bridgeville, Pennsylvania: Mary Eleanor Boyle, orientation and mobility instructor; Henry R. Hissrich, instructor in kinesiatrics; Mrs. Ruth L. Lockson, rehabilitation counselor, Psychosocial Department; Virginia E. Lind, instructor, Education Department.

■ Arkansas Enterprises for the Blind, Little Rock: Dewey S. Lantrip, instructor in pre-vocational training.

■ Texas School for the Blind, Austin: Robert A. Hansen, superintendent; Charles R. Young, principal.

■ John Milton Society for the Blind, New York City: Rev. Francis Thom, general secretary.

■ Catholic Guild for All the Blind, Newton, Massachusetts, Board of Directors: Dr. Robert W. Mann, president.

■ Argosy Recording Club, Norfolk, Massachusetts: David W. Lozeau, coordinator.

■ Lighthouse for the Blind, Seattle: James Gillis, orientation and mobility specialist.

■ General Council of Workshops for the Blind, new officers: president, David M. LaCrosse, executive vice-president, Center for the Blind, Philadelphia; vice-president, Rudolph Elmer, executive director, Lighthouse for the Blind, Seattle.

Coming Events

January 18-23 American Library Association, Midwinter Meeting, Los Angeles.

February White House Conference on Youth, Washington, D.C.

March 17-20 Association for Children With Learning Disabilities, Annual Conference, Chicago.

April 4-8 American Personnel and Guidance Association, Atlantic City, New Jersey.

April 18-24 Council for Exceptional Children, 49th Annual International Convention, Miami Beach.

April 26-May 1 Association for Research in Vision and Ophthalmology, Annual Meeting, Lido Beach, Florida.

April 29-May 1 United Cerebral Palsy Associations, Annual Conference, Denver.

April 30 National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, Annual Meeting, Atlanta.

May 2-6 National Industries for the Blind, Spring Workshop, Fort Lauderdale, Florida.

May 9-12 International Association of Rehabilitation Facilities, Las Vegas.

May 16-21 National Conference on Social Welfare, Annual Meeting, Dallas.

May 17-20 National Braille Association, 11th National Conference, Chicago.

May 24-26 American Ophthalmological Society, Annual Meeting, Hot Springs, Virginia.

June 6-10 Special Libraries Association, San Francisco.

June 20-26 American Library Association, Annual Convention, Dallas.

August 4-8 Blinded Veterans Association, 26th Annual National Convention, Miami Beach.

October 28 Foundation Day, American Foundation for the Blind, New York City.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, San Francisco.

Sensi-Quik

The Touch Cane for Walking
Faster with Safety

The New Fiber-Glass Cane

Sensi-Quik's shaft is made of large diameter, tapered tubular fiber-glass with gleaming white pebble finish, and has a bright red band at its tip. The smart-looking contour handle is of black vinyl. The 1/2-inch diameter, diamond-hard, tungsten-carbide working tip resists wear, and produces sharp, useful touch information. The cane is put together with epoxy, as fiber-glass golf clubs are, to withstand repeated sudden impacts.

The Sensi-Quik fiber-glass model comes with either crook or contour handle and either carbide or replacement steel tip. Sensi-Quik is also available in high-strength, nickel-plated, steel shafts recommended for 50- to 60-inch canes when extra strength is desired. The steel shaft adds three to four ounces to the weight of the cane.

Canes are made on individual order in any length from 34 to 60 inches.

Developed and distributed by the Go-Sees, a non-profit corporation, Sensi-Quik canes are not sold. They are supplied to anyone who joins the Go-Sees and pays a membership fee of \$5. They are also available through agencies to individual trainees at a reduced rate of \$4 (they must be ordered in even-inch lengths).

Persons or agencies interested in the Sensi-Quik cane are invited to contact



Along with the Sensi-Quik cane, the Go-Sees provide an instructional manual entitled "Touch and an Occasional Tap." It is available on disk and tape and in braille and ink-print. In addition to stating the philosophy of the Go-Sees, the manual teaches the vocabulary of "cane talk words" that enable the traveler to respond quickly and deftly to the messages his cane picks up from the environment. The manual is available on loan from the address below.

Franklin S. Clark
The Go-Sees
166 East 92nd Street
New York, N.Y. 10028

THE NEW Outlook FOR THE BLIND

February 1971 Volume 65 Number 2

Articles

- 41 The Use of Abacus Contests to Increase
Interest in Mathematics
Marian Lewis
Gary Coker
- 49 Sources of Agency Referrals
Suzanne Johnson
- 51 Legislation for the Aging
Irvin P. Schloss
- 56 Education and Habilitation of Multiply
Handicapped Blind Youth
Gil Johnson
Dean Tuttle
- 63 A Recreational Survey of Blind Persons
Who Are 60 Years of Age and Older
Alonzo V. Mercer, A.C.S.W.

Departments

- 68 Current Literature
Mary Maie Richardson
- 69 Answers to Accreditation Questions
- 70 News in Brief

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745

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The Use of Abacus Contests to Increase Interest in Mathematics

If we take a look at the present trends in the education of the blind, we see a great deal of change over the last few years. Many of the recent changes have centered around the needs of the "special" student. Much emphasis is being placed on orientation and mobility, activities of daily living, etc. With the core academic curriculum, we find that fresh ways to attack problems are being experimented with.

One of the most persisting and frustrating problems in academic work has been in the area of mathematics. This problem has been defined by studies which indicate that in mathematics visually handicapped students are not doing as well as average sighted students, although their work in literary subjects is on about the same level. What changes in methods of instruction or in computation apparatus might be made to improve the level of achievement?

□ When we take a look at the present apparatus being used to teach mathematics to a blind child, it is easy to become frightened at the complexity and magnitude of these tools as compared to those a sighted child uses. We sometimes hear sighted children complain about their problems in mathematics, but we can only wonder what would happen if they were given a braillewriter, cubarithm slate, Taylor slate, and a different code in which to write. What if they were told that after they had mastered all of these, they would probably be slightly below average in what they could achieve. Granted, this is somewhat exaggerated, but it points up the problems in our present program.

A sound mathematics program must begin with the teachers. Preferably, all should be versed in modern approaches to mathematics and their definite advantages in developing the concepts, power of reasoning, and computational skills needed for future work. It can be difficult to convince a child of the value of a particular approach unless the teacher is thoroughly familiar with it and is "sold" on the idea. If a school is to have a mathematics program that is developed on a spiral basis, then it becomes increasingly important that all teachers become familiar with the main mathematical concepts and skills that are introduced. It has been our experience that such a program has its best results when all teachers of mathematics are included in an extensive in-service training program.

□ Three years ago, all of the mathematics teachers in the Tennessee School for the Blind began what was eventually to become a complete up-dating of their mathematical knowledge and skills. In the first year, preparations were made for a school-wide change to the Cranmer abacus, as it was felt that this computational aid was much more efficient than any other which had been tried. In order to make the change, teachers of mathematics attended a course on the use of the abacus at the Special Education Department of George Pea-

MARIAN LEWIS
GARY COKER

Mrs. Lewis is an elementary teacher and Mr. Coker is principal at the Tennessee School for the Blind, Donelson.

The material presented in this article reflects the work of the entire school staff.

Problems in Teaching Mathematics to Blind Students

Teacher interest is essential

The Up-dating of Knowledge and Skills

body College. The following year, a state specialist in mathematics provided several weeks of in-service training on the teaching of modern mathematics, and shortly thereafter some of the newer techniques were being put into use. The introduction of new textbooks which use the modern approach to mathematics naturally followed the teacher preparation.

It is our opinion that the learning of mathematics should have a certain amount of fun incorporated in it. One of the first steps in this direction is to use discovery techniques through which pupils become actively involved in finding patterns, generalizations, and rules for themselves. In this way, it is possible to teach the principles of mathematics and their applications, rather than merely requiring the memorization of rules. The "why" of numbers and operations is as important as the "how."

The Cranmer abacus has proved to be the most effective computational tool for the majority of students. It contributes in many instances to a high degree of motivation, more effective conceptualization, and increased speed in computation. As with all skills, proficiency in the use of the abacus is developed only when instruction follows a continuous spiral. We have found that the abacus has created a desire for mathematical skill unlike any we have experienced before.

□ One of the most interesting and exciting developments during the year in which the change was being made to the abacus was the realization that the abacus could be used for games and competition. As soon as some of the students in a class had learned an abacus process, such as addition, they began to gather in groups during their free time to work for fun. Naturally this led to games and, before long, someone suggested an abacus "bee" for the class, set up somewhat like a spelling bee. This was tried, the rules being made up by the students and teachers as the contest was actually being held.

Based on the success of the classroom competitions, the abacus committee decided to hold a formal contest by divisions before the entire student body. This intramural contest helped in many ways to strengthen the abacus program and to keep the faculty and students working together. Another type of contest was developed to set up a match between a team from the school for the blind using the abacus and a team from the same grade in public school using pencil and paper. Since one or more of these contests might be possible in any type of teaching situation where the abacus is used, each is discussed below in more detail.

All of the contests proved to be very interesting, both for the contestants and for the spectators. Probably the most unusual contest was the challenge contest in which two people entered for each type of computational device or method that had been in use for the last few years—Taylor slate, braillewriter, Cranmer abacus, and others, to allow for "free style" competition. No special rules were needed for this. There were striking differences in speed, with the abacus being much faster than any other method used.

An abacus "bee" can be used with a class or grade to speed learning and to stimulate interest. Children are very quick to accept the game approach which this gives. It may be used frequently, as when a process such as adding is being

Developing more interest in mathematics

The Abacus Bee

"Free style" competition between different devices

Value of the abacus bee

learned. The bee is especially good because all the class members compete, yet the final score is a team result. The team's help in teaching is also possible by forming the teams two or three days before the contest date, thereby giving them a fine opportunity for team practice and for individual coaching. The increased motivation is often enough to make the slower students practice much more. Suggestions for setting up and conducting an abacus bee are included in Appendix I.

□ For the Tennessee School for the Blind to hold an intramural abacus contest the first year that the abacus was in use throughout the school would seem to be too difficult an undertaking. Not only was the abacus new to the students and teachers, therefore making a great deal of work necessary on the part of both to learn the best means of gaining the proper skills and understandings, but there was also the need to originate and put into effect a contest plan, since there was none that was known of to use as a pattern. Yet, when the contest was proposed, everyone was in favor of trying.

It is a tribute to the teachers on the contest committee that they were able to plan and put into effect an intramural contest which proved to be highly interesting and altogether satisfactory not only for the contestants and their teachers but also for other faculty members and the advanced high school students who did not have a scheduled mathematics class. Their enthusiasm and careful planning developed a contest plan which included everything from preliminary arrangements to the duties of officials and the trophies to be awarded. (Details are presented in Appendix II.)

The contest plans were used for three separate divisions that year with no need for changes, nor were any changes contemplated when it was decided to continue with the contest as an annual event. There were many comments from observers on the speed and accuracy of the contestants, and many students in the audience worked on their own abacuses right along with those on stage.

□ An interesting contest which also includes an opportunity for visiting between schools in the same city is a mathematics contest between visually handicapped students and sighted students in public school from the same grade. Students who have learned to use the abacus as their best tool for computation may wonder how their skill compares with that of public school students who use pencil and paper for their calculations. Many methods of computation used by blind students are tedious and frustrating for them and for their teachers, but the abacus seems to afford more speed and ease of manipulation.

A contest between a team of abacus users and a team using pencil and paper allows both students and teachers to find out more about the comparative efficiency of the abacus. At the same time the teachers can determine how their students compare on general computation ability.

The classroom teacher can make arrangements with a teacher of the same grade level in public school for the competition. Each may want to secure the help of someone to serve as an official during the contest. The type of problems and their selection will need to be agreed upon. Usually the two classes

An Intramural Abacus Contest

A complete contest plan developed in the first year

Contest Between the Abacus and Paper and Pencil

Interschool contest allows for comparisons

will have been working the same type of problems. For instance, by the end of the fourth grade both groups should be able to handle addition with four addends having up to four digits each, multiplication of three- or four-digit numbers, and division by one-digit divisor.

Suggestions for setting up and conducting such a contest are included in Appendix III.

□ A visually handicapped student must take advantage of all the mathematical tools at his disposal. It is not for us to say that one tool is better than another. There are times when a student should use the braillewriter, slate, or some other device. The use of these and the abacus should be an individual matter. We do feel that the abacus offers a more rapid means of computation than most other devices. It does not supplant these others, however, but supplements them in the mathematics program.

It has been found that contests stimulate learning in mathematics. Abacus contests were helpful in encouraging students to practice the use of the abacus and in creating more interest in it. The abacus bee was especially valuable because each student was involved on a team basis, and yet was allowed to compete on his own level. This meant that he not only had a good chance to win first place, but that whatever his performance he could usually earn points for his team.

Summary

Appendix I. An Abacus Bee.

Team Selection and Organization.

1. Two captains are selected by the process of nomination and voting. The captains choose their teams by alternating turns to name members of the class, who join their captain as named. The names of the members of each team are listed as chosen. Each team may want to "huddle" to choose a team name.

2. Competition between the teams is between the individuals in the order chosen, that is, captains against each other, then their number one choices against each other, and so on until each member of a team has competed against the person corresponding in order on the opposite team. (As a usual thing, the captains turn out to be students known by the class to be good on the abacus. Naturally, each captain has wanted the best workers on his team, so he has chosen these as his early choices, which results in fairly good pairing of students on the basis of ability.)

3. If there is an odd number of students, all may be chosen, then the captain of the team with the smaller number of contestants may choose either the last or the next to last member of his team to compete against the last member of the opposing team. (Optional, to equalize ability.)

4. The same team may be kept for two abacus bees, if desired, but after that a change gives a chance to "begin again."

Rules for Competition.

1. Teams are seated as two separate units, with each member having his own abacus on which he may work along with the contestants.
2. The two contestants come to desks arranged in the center when they compete. Only the captain or co-captain may escort the contestant. Or, the desks may be arranged in two lines facing each other.
3. Students should be quiet while the contestants are working. Each captain will be responsible for helping to keep order in his team.
4. Contestants remove hands to side of abacus to signal completion of the problem.
5. Time may be called on a contestant if judged necessary.
6. Contestant reads his answer, with a judge watching (the judge may correct his reading if it does not agree with the answer actually recorded on the abacus).
7. Scores are added at the end of a round (one turn each, through the team), and the results announced. After a short break, the second round (or more if desired) may be held. A turn is one problem.
8. Points:
 - 5 points to first contestant with the correct answer.
 - 5 points to each contestant in case of a tie.
 - 3 points to second contestant if his answer is correct.

Appendix II. Intramural Abacus Contest.

Arrangements.

1. There are three divisions: a Junior Division (grades three and four); an Intermediate Division (grades five and six); and a Senior Division (grades seven, eight, and above).
2. All students participate in the first contest in the individual classrooms. There is no limit on the number of students selected for the next contest.
3. Quarter and/or semi-finals are to be conducted between the classes in each division—time and place at the discretion of teachers. A total of four (4) students are to be selected from each *division* for the finals. Students compete on an individual basis throughout.
4. Final contest for each division is to be held on separate days before the entire student body.
5. Awards are an engraved trophy to the first-place winner in each division and ribbons stamped with appropriate division and place for second-, third-, and fourth-place winners in each division.

Rules for Competition in Finals.

1. The four finalists are known as A, B, C, and D.
2. All four compete in all of the categories of the contest to be held in their division.

3. An official reader reads the problems to the contestants, one problem being worked by all at the same time.
4. One adult official is assigned to each contestant. Official raises a card with the contestant's letter on it as soon as the contestant finishes each problem.
5. Hands off abacus at completion of work. There can be no changing of beads once the hands are removed from the abacus.
6. After each calculation, answers are given by the contestants in turn as the reader calls them. (Official for each contestant corrects the answer if the contestant reads his abacus incorrectly, or if repetition is needed for the recorders to hear.)
7. Two recorders record the order of completion, accuracy, and points.
8. The correct answer only is read for the audience by the official reader.
9. Points for scoring: 4 points for the first to finish; 3 points for the second to finish; 2 points for the third to finish; and 1 point for the fourth to finish. If any contestant has the wrong answer, he is given zero (0) points, and the next to finish scores the points he would have received in that place.
10. In the event of a tie on one problem, each contestant will receive full points for the tie place. For example, a tie for first to finish: A-4, B-4, C-2, D-1; for second to finish: A-4, B-3, C-3, D-1; for third to finish: A-4, B-3, C-2, D-2.
11. If all four answers for one problem are inaccurate, another problem is to be read. (Limit: A total of three problems read to reach an accurate answer in any event in a category. If, after three problems, there is still no correct answer, no points are given and the next category of problems is begun.)
12. Recorders may call time on contestant's calculations if necessary.
13. After each category, announcer gives place rankings of A, B, C, and D contestants, but not the scores.
14. Applause should be held until the announcements of places for each category.
15. All officials confer in the event of a complication during the finals. Decisions of the officials are *final*.
16. Upon completion of the last category, the announcer states total points and names of winners, starting with fourth place and progressing to the first-place winner.
17. If a total point tie between two or more contestants exists at the conclusion, it should be broken before announcement of the final winners. Three problems should be given, one each from three different categories, to the tied contestants to decide positions.

Appendix III. Contest Between Abacus and Print.

Team Selection.

1. A team of three members is selected by each class.
2. The team may be selected by any method desired.

3. The team competes as a group, not individually. (This speeds up the contest and makes scoring easier.)
4. Each team may have an alternate member, to be used if needed.

Rules for Competition.

1. Competing teams are seated together at a table or at desks that have been placed close together.
2. The problems are read by an official reader.
3. Each contestant raises his hand to signal that he has completed his calculations.
4. The contestant reads his answer when called upon, with a judge watching (the judge may correct his reading if he has read it incorrectly).
5. The scorekeeper records the scores after each problem. He should have a list of correct answers so that he can be recording the scores for each team member while the official reader is announcing the answers.
6. Points for accuracy: 5 points for each team member having the correct answer (each team may score 15 points on one problem); points for speed: 5 points for the team having a contestant first with the correct answer and 3 points for the team having a contestant second with the correct answer. Second-place points for speed are optional and may be omitted if there are not enough officials.
7. Time may be called on a contestant if the official reader deems it necessary.
8. At least four problems should be given in each category. That is, there should be four or more addition problems and the same for each of the other arithmetic processes chosen as categories for the competition.
9. Separate team scores are to be kept for both accuracy and speed.

Sample Score Sheet for Abacus Bee.

<i>Team:</i>	<i>Round</i>			<i>Round</i>	
	<i>#1</i>	<i>#2</i>		<i>#1</i>	<i>#2</i>
<i>"Flexible-Minded Ten"</i>			<i>"American Winners"</i>		
1. Gary (Captain)	5	5	1. Keith (Captain)	3	5
2. Freddy	5	3	2. Terry	5	5
3. Roosevelt	3	3	3. Marty	5	5
4. Charles	0	0	4. Barry	5	5
5. Sarah	0	5	5. Natalie	0	0
6. Jeff	0	5	6. Clemmie	5	3
7. Millard	5	0	7. Rosalyn	5	5
8. Stephanie	0	0	8. Johnnie	0	0
9. Bessie	0	0	9. Rusty	0	0
10. Julie	3	0	10. Susan	0	0
11. "	0	5	11. Donnie	5	0
<i>Tally:</i>	<i>Round #1</i>	<i>Round #2</i>	<i>Total</i>		
<i>"Flexible-Minded Ten"</i>	21	26	47		
<i>"Amercian Winners"</i>	33	28	61		

Sample Score Sheet for an Abacus and Print Contest.

Problems						Problems					
	#1	#2	#3	#4	Totals		#1	#2	#3	#4	Totals
<i>Print team:</i>						<i>Abacus team:</i>					
Add						Add					
Accuracy	5	—	5	5		Accuracy	5	5	5	5	
	5	5	5	5			5	5	5	5	
	5	—	5	—	45		5	5	5	5	60
Speed 1st	—	—	—	—		Speed 1st	5	5	5	5	
2nd	—	—	—	—	0	2nd	3	3	3	3	32
Multiply						Multiply					
Accuracy	5	5	5	5		Accuracy	5	5	—	—	
	—	—	—	5			5	5	5	5	
	—	5	5	5	40		—	5	—	5	40
Speed 1st	5	—	5	5		Speed 1st	—	5	—	—	
2nd	—	3	—	—	18	2nd	3	—	3	3	14
Subtract						Subtract					
Accuracy	5	5	5	5		Accuracy	5	5	5	5	
	5	5	5	—			5	5	—	5	
	—	5	5	5	50		5	—	5	5	50
Speed 1st	—	5	—	—		Speed 1st	5	—	5	5	
2nd	—	—	3	—	8	2nd	3	3	—	3	24
Divide						Divide					
Accuracy	5	5	5	5		Accuracy	5	5	5	5	
	5	5	5	5			5	5	5	5	
	5	5	5	5	60		5	5	—	5	55
Speed 1st	5	5	—	5		Speed 1st	—	—	5	—	
2nd	—	—	3	3	21	2nd	3	3	—	—	11
Final Score: Accuracy					195	Accuracy					205
Speed					47	Speed					81

Sources of Agency Referrals

Case finding, locating those who need services, is the number one concern of any social agency. The primary attempt to do this is through a program of public education which describes the services offered by the agency and which, it is hoped, will reach those who specifically require those services. Those who refer themselves to the agency, however, are frequently in the minority. The importance of reaching these individuals lies, of course, in the fact that services should be initiated when the individual is ready to accept them. If the individual does not find the agency and its services during this period of readiness, he may lapse into a state of hopelessness, a trend which often can not be reversed.

Both when a client is self-referred and when he did not know about the agency himself but was referred there by some other person, a professional or otherwise, the amount and accuracy of the information he has about the agency when he makes his first contact for services will affect his reasons for deciding to make the contact and his expectations concerning the kind of help he will receive. For example, a client is often referred to an agency to learn braille or to receive some kind of medical help in a low vision clinic. It is very seldom that he is told that, if he were interested, he could learn homemaking, self-care, skills of daily living, etc.

□ For these reasons, therefore, an informal study of the cases which were referred to this writer, in her capacity as a rehabilitation teacher, during one 14-month period was conducted in an attempt to determine the sources of these cases. The survey involved 54 clients whose ages ranged from 20 to 80 years. The primary source of information was agency records. No interviews or questionnaires specifically designed for this study were used. On the other hand, during regular teaching sessions, clients sometimes commented about where they had first heard about the agency and occasionally they were asked specific questions to help clarify the information in the agency files. Such comments and answers were included in the study. No questions, however, were ever directed to persons other than the client himself and statements from other persons were not used. Finally, no attempt was made to determine client satisfaction with the services he received, even though it would be interesting to find out if satisfaction with services is related to information given to the client when the referral is made. The results of the survey are presented in Table 1.

The individuals in this survey who were self-referred (11) or referred by a friend or family member (6) received their information from a variety of sources. Two first acquired information from a librarian, although in one instance the librarian had known someone personally who had worked for an

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Importance of early referral

The Present Study

TABLE 1
Sources of referrals

Self-referred	11
Relative or friend	6
Nursing home	1
Welfare Department	21
Physician	3
General hospital	1
State hospital	1
Social Security Administration	1
Other social agencies	3
Unknown	6
Total	54

agency for the blind. One person was first informed by a member of the Lions Club, one by another blind person, and several just happened to know someone who worked for an agency for the blind or who had received services from such an agency. Clearly, there must be many persons who could benefit from services who do not accidentally come in contact with someone possessing such information. One client who just happened to know a family with a crippled child was informed by a worker from an agency serving crippled children. One person was informed by the state employment commission. The most striking fact is that, so far as could be determined, no one in this group was first told about rehabilitation services by an ophthalmologist or other medical person.

□ It is significant that only one of the referrals was from a nursing home. It is well known that most blind persons are also older persons. Nursing homes would, therefore, seem to be a logical place from which to expect many referrals. The public education of nursing home staffs has apparently been neglected by agencies serving the blind. The fact that nursing home residents are non-vocational cases that would not be counted as placement closures may have led some agencies to neglect this important area.

The statistics accumulated in this study indicate that a large number of clients (21) are on welfare. The Division of Services for the Blind in Michigan is a part of the State Department of Social Services and, therefore, when an individual first applies for aid to the blind, he is automatically referred to the Division for the initiation of any services which may be needed or desired by him. People who are financially secure and, therefore, who do not require financial assistance may thus remain unaware of rehabilitation services. Indeed, the fact that the agency serving the blind is a part of the State Department of Social Services may lead some people to believe that only financial assistance is available and, because some people will not accept anything without paying for it, may prevent their applying for services.

There were surprisingly few referrals (5) from physicians, ophthalmologists, or other medical specialists. When a person experiences visual difficulty, an ophthalmologist is often the first professional to be consulted. Also, many blind persons have additional handicaps or health problems and may, therefore, be under the care of a variety of specialists. It would appear that more public education needs to be aimed at the medical profession.

A fourth observation which appears to be worthy of notice is the small number of referrals (3) from other service agencies. One of the referrals in this study was from a private social agency, the other two from employment agencies. Communications between various agencies seems to be a major problem and, far too often, agencies appear not to be at all cognizant of each other. One method of agency public education, of course, is through the process of referrals; if community resources are utilized to meet the needs of individual clients, agencies will, at the same time, come to know more about each other.

Referrals From Nursing Homes

Referrals from the Welfare Department

Medical specialists

Social service agencies

(Continued on page 55.)

Legislation for the Aging

It's tough to be old—unless you're healthy and wealthy! The numerous problems which inevitably come with growing old are further complicated by the economic, social, and housing patterns of the United States today. The three-generation family living together in one household—a means by which many families solved or mitigated some of these problems in past generations—is increasingly rare today, for the personal desires of the family members of the several generations are “to do their own thing” without interfering with the way of life of others. Today's urban decay and suburban sprawl, with the attendant transportation and shopping problems, are additional complications.

□ “Money—the lack of it—is the number one problem of older people in America,” says John D. Martin, special assistant to the President for aging and commissioner of the U.S. Administration on Aging. “Older Americans have many problems,” Martin goes on, “problems of health, loneliness, isolation, housing, transportation, nutrition. But the lack of income is the greatest, contributing to all the other difficulties. Faced with a 50 to 60 percent automatic drop in income upon retirement, retirement often mandatory, our older citizens are becoming the new poor of America.”

It's tough to be old, but it's even tougher to be old and blind. Just think for a moment of all of the problems just mentioned and add to them newly acquired blindness—a condition which imposes severe economic, social, physical, and psychological problems on an individual who is also faced with many similar problems already just because he is old. Just imagine learning to do the simplest of everyday tasks like eating, cooking, going from one room to another, going for a walk without sight, after 50, 60, or 70 years—a lifetime—of doing these things with sight, easily, automatically, and without special concentration. And just imagine someone having to acquire all of these new skills on his own or with the aid of inept, frightened, and impatient family members (who make him feel even more tense or helpless) because professional services aren't available where he lives or because he can't afford the cost of the few that are available.

This is the problem of most of the blind people in the United States, for most of them are older and have become blind late in life. And adequate help is not available for most of them either through public or private agencies. There are federal laws on the books which could have been used to help, but they have not resulted in the development of adequate programs.

□ Let's look at some statistics to see the scope of the problem. Ten percent

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Lack of Money

Aging and blindness

Statistics

of the population—about 20,000,000 persons—are 65 years of age or older. Another 20 percent—about 42,000,000 persons—are between 45 and 65 years of age. The National Society for the Prevention of Blindness estimates that there are approximately 430,000 people in the United States who are considered blind according to the accepted legal definition of blindness. Of these, three-quarters are 40 years of age or older. Of the 40,000 Americans who lose their sight each year, NSPB estimates that 30,000 are 40 or older. The National Center for Health Statistics of the U.S. Public Health Service estimates that 1,239,000 people in this country are severely visually handicapped and cannot read ordinary newspaper print with the aid of correcting glasses. The Center estimates that 1,099,000 of these are 45 or older. Since it is felt that those over 40 without serious handicaps will have difficulty in finding employment because of their age, it goes without saying that people over 40 who have a serious visual impairment will have an even more difficult time in finding employment or even in staying in their existing jobs; and few of these are considered prime candidates for vocational rehabilitation by public agencies.

Since blindness in the United States, in the light of current medical knowledge, is a function of population, it follows that the blind population will increase as the general population increases and that most of these will be older blind persons.

□ Let us look at what we as a people are doing collectively, through programs developed as a result of federal legislation, to meet some of the needs of our older citizens, specifically those who are blind. As Commissioner Martin has stated, lack of income is the single most serious problem. Since 1935, the Old Age, Survivors, and Disability Insurance program under Title II of the Social Security Act has been the most important single source of retirement income for the elderly. However, the World War II years, with their substantially higher general tax structure, delayed the projected increases in tax rates and in the taxable wage base used by the Social Security System. As a result, even with the 15 percent increase in cash benefits which became effective early in 1970 and the projected five percent increase in the pending Social Security bill, the average retired individual will be getting \$129 a month and the average elderly couple only \$199 a month. The projected maximum for an individual who retires in 1971 under the pending bill is \$203.40 and for a couple \$305.10.

Title I of the Social Security Act provides for public assistance to needy individuals 65 and older through a federal grant-in-aid program to the states. Of the 2,000,000 people on these old age assistance rolls, it is estimated that 60,000 are within the legal definition of blindness. Title X of the Social Security Act provides for public assistance to blind persons through a federal grant-in-aid program to the states. The median age of the 80,000 blind persons on Title X rolls is 63 and most of the elderly recipients are widows and widowers. Average monthly benefits vary from state to state in both of these programs. The lowest average per recipient is \$39.80 in Mississippi, the highest, \$148.15 in Massachusetts.

After a lifetime of work, many Social Security old age pensioners find it

Blind population increasing

Federal Legislation and Programs

The Social Security Act

Welfare supplements for Social Security

necessary to apply for welfare to supplement their incomes. But when Social Security benefits are increased because of increases in living costs, most states offset this increase by decreasing the amount of the welfare supplement, except for a small mandatory pass-along of \$4 a month. The net effect is to save money for state governments and to leave most elderly persons as poor as they were before the increase.

□ One of the major improvements in our social insurance system is the disability insurance program under Title II of the Social Security Act. An individual under 65 years of age who has the requisite number of quarters of covered employment can receive cash benefits for himself and his family if he has a serious disability which prevents him from engaging in substantial gainful activity for at least 12 months. This benefit is a boon for blind persons over 40 for whom vocational rehabilitation to a significant earnings level may be extremely difficult to achieve. A few years ago, disabled widows, widowers, and surviving divorced wives were made eligible for cash benefits at age 50 on an actuarially reduced basis. However, the disability must be so severe as to preclude any gainful activity.

Although adequacy of income is the single most important need of the elderly, our social insurance programs fall far short of meeting this need in a realistic manner. Our welfare programs offer no more than bare subsistence. Although the increase in the number of private pension plans will fortunately make financial security more attainable for many more people who retire in future years, the bulk of our 20,000,000 Americans over 65 need a more immediate solution to their problem, a problem which has been compounded by the serious inflation of recent years.

□ What about health problems? One of the most significant pieces of social legislation enacted in this country is Title XVIII of the Social Security Act, the Medicare program for people 65 and older who are entitled to Social Security benefits. As a result of this law, no older person who qualifies and who can afford the deductibles and so-called co-insurance payments needs to forego adequate health care. The program still has some major shortcomings. It does not cover prescription drugs, a high expense item for elderly persons with common chronic ailments and it does not cover rehabilitation center services for newly blind elderly persons, even though it may cover similar therapeutic procedures for people with other types of disabling conditions as a logical follow-up of their initial illness. For example, a stroke victim with residual paralysis can get physical therapy services in a variety of settings under Medicare. A stroke victim who loses his sight as a result of the stroke cannot get basic rehabilitation services to deal with his blindness unless it is part of a hospital program.

In 1965, Congress also enacted the Medicaid program under Title XIX of the Social Security Act for individuals entitled to welfare. Needy people can actually get more health services under this program than under Medicare in some states. But since Medicaid is a federal-state program, it is hampered by the fact that some states have not implemented it at all, while others have limited the amount of their financial participation. Financial problems associated

Disability Insurance Program

Program is inadequate

Title XVIII—Medicare

Title XIX—Medicaid

with both Medicare and Medicaid will ultimately result in a comprehensive national health insurance program with stricter limitation on hospital costs and physicians' fees.

The problem of adequate housing for elderly persons increases as the purchasing power of their retirement income decreases. There are federal laws to assist in the construction of low-rent housing for the elderly and to provide for rent supplements, but effectiveness has been hampered by a number of factors, including low appropriations.

□ What about special services for elderly persons? The Older Americans Act of 1965 established the Administration on Aging, in the Social and Rehabilitation Service of the Department of Health, Education, and Welfare, to be the federal resource agency on the elderly. The Act contains three major grant programs. Title III allots funds to states to strengthen state agencies on aging and to enable states to make grants to local public and private nonprofit agencies for projects providing services to older people, for community planning and coordination of programs, for demonstration programs, and for the training of special personnel.

Title IV provides for direct grants or contracts for research and demonstration projects of national or regional interest and value. Title V supports, through grants or contracts, specialized training for persons employed or preparing for employment in programs in aging.

The authorization of appropriations for these programs for the current fiscal year is small in relation to the need—\$25,000,000 for Title III and \$15,000,000 for Titles IV and V. Only a few agencies for the blind are participating in these programs and more should be encouraged to do so as a means of developing more effective programs to assist older blind persons in their localities.

□ As we all know, one of the major shortcomings in our field is the adequacy of services to older blind persons, despite the fact that the bulk of our blind population is over the age of 40 years. With vocational feasibility the principal factor for services under the federal-state vocational rehabilitation program, comparatively few blind persons over 40 receive services through their state agency. Some local voluntary agencies are providing some services but they are hampered by financing.

Since 1956, state welfare agencies have had legislative authority under the public assistance program, with open-end funding from the federal government, to provide services leading to self-care and self-support. This authority was broadened in 1962 to provide for 75 percent federal matching for rehabilitative, self-care, and prevention of dependency services. Despite this broad authority and open-end funding, state welfare agencies have done very little to serve the elderly blind and have concentrated on cash assistance.

To meet the critical need of older blind persons for basic rehabilitation services not necessarily related to vocational training and employment at the end of the process, the American Foundation for the Blind, in a joint effort with the American Association of Workers for the Blind, American Council of the Blind, Blinded Veterans Association, National Federation of the Blind,

Adequate housing a problem

Older Americans Act of 1965

Small authorization of appropriations

Few Rehabilitation Programs

Legislative authority exists

Amendments to Vocational Rehabilitation Act proposed

and the National Council of State Agencies for the Blind, proposed legislation to amend the Vocational Rehabilitation Act for this purpose. The bill would establish a new Section 18, entitled Rehabilitation Services for Older Blind Persons, under which grants would be made to state vocational rehabilitation agencies serving blind persons for provision of these services. The federal share would be 90 percent. In addition to direct services, the proposed legislation also provides for research and demonstration programs and training of personnel. Older blind persons are defined as individuals whose combination of severe visual impairment and age makes gainful employment less readily attainable in the light of current employment practices.

□ In summary, I have outlined the needs of older blind persons for adequate income, health care, rehabilitation services, housing, and other special services. I have briefly discussed existing federal laws designed to meet these needs and one proposal to meet the urgent need for rehabilitation services. Clearly, all of these programs need drastic improvement in many ways if adequate income and services are to be assured. And equally important, state and local agencies, which must inevitably be the providers of direct services, must forcefully advocate these services and become prepared to provide them.

Summary

Sources of Agency Referrals—Continued from page 50.

□ This paper raises the question of how to encourage more persons from all walks of life to seek assistance, other than financial, from agencies serving the blind. More public education is definitely needed, especially for ophthalmologists, doctors, hospitals, nursing homes, and medical specialists of all kinds, as well as professional persons in other social agencies. Community leaders who are in a position of influence should also be informed. To this writer, however, public education will never be the complete and only answer. People remember more what they see and are involved in than what they are simply told. The utilization of community resources for clients and the integration of clients into community activities will make a much more lasting impression upon individuals than will public service announcements and other forms of public education. A blind person who can once again be a part of the community because of the new skills and new outlook that he has received through the efforts of an agency is the best advertisement that any agency could ever hope for.

Conclusions

Education and Habilitation of Multiply Handicapped Blind Youth

The increasing numbers of multiply handicapped blind children and their associated educational and vocational problems has led to a cooperative rehabilitative effort between the California School for the Blind and the California State Department of Vocational Rehabilitation.* Accepting the responsibility for the education and habilitation of these previously disregarded student-clients has led both agencies to alter their philosophies, objectives, and programs.

Until recently, the Department of Vocational Rehabilitation had in only isolated instances provided services to individuals with more than one diagnosed handicap. There was, however, no planned approach for meeting the needs of multiply handicapped blind individuals. Furthermore, there had been little or no effort to actively search for those clients who were in need of rehabilitation services or to coordinate such services with other agencies. Because of the specialized educational needs of blind children, e.g. competency in braille, adjustment to blindness, and adapted equipment and materials, the residential school for the blind has traditionally been a facility only for the education of visually handicapped students with the primary goal having been the academic preparation of students for high school and, hopefully, college.

□ In the early 1950's, the public schools began sharing some of this responsibility through the establishing of resource and itinerant programs for the visually handicapped. These programs have become so extensive in California that, by 1969, over 90 percent of the approximately 1,800 visually handicapped children in California were being educated in the public schools. For the most part, the students thus served were of at least average intelligence and without additional handicaps.

Multiply handicapped blind children (with visual handicap plus one or more additional handicaps, such as mental retardation, cerebral palsy, emotional disturbance, deaf or hard of hearing, orthopedic impairments) were, in the main, neglected by both the residential and the public school programs. As the mortality rate among infants having birth defects decreased and the increasing number of parents with multiply handicapped children began effectively communicating their frustrations over the lack of educational opportunities, it became impossible to continue ignoring the needs of this group. To

* The California School for the Blind, Berkeley, is administered by the State Department of Education. The only residential school for the blind in California, it has a present student enrollment of approximately 145 students. The California State Department of Vocational Rehabilitation is a state-wide program serving the blind and other individuals. The focus of this agency is to rehabilitate individuals to become self-supporting.

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Historical Perspective

More multiply handicapped children needing services

the extent that the public schools have developed programs for the education of visually handicapped children, the California School for the Blind has been able to focus on initiating programs for multiply handicapped blind children. □ As the number of multiply handicapped blind has increased at the California School for the Blind over the past several years, it has become evident that the traditional educational program could not meet the needs of these students. Gradually, the old program was modified, new concepts and approaches tried, and out of these struggles and deliberations the current program evolved.

Eighty-five percent of the present population of the school for the blind are multiply handicapped and, for them, continued work in the academic areas of reading, writing, and arithmetic is not of primary concern. The major objective is to help these students to develop the necessary skills for functioning in a sheltered, custodial environment or, if possible, at a somewhat more independent level. While striving for maximum growth in each area of instruction, the learning experience has had to be geared to the emotional tolerance of each child. To enable him to more nearly reach his potential, the temper tantrum and/or withdrawal has had to be replaced with more effective means of handling stressful situations. In Table 1, the instructional program for these children is outlined and the functional level of the students at enrollment and termination is indicated.

Current School Program for Multiply Handicapped Blind Students

High proportion of students are multiply handicapped

<i>Instructional Areas</i>	<i>Average Skill Level at Enrollment</i>	<i>Average Skill Level at Termination</i>
Self care	Putting on shirt	Bathing and dressing
Social	Establishing a relationship with another	Relating appropriately in a group
Daily Living	Wiping a table clean	Keeping one's room neat and orderly
Homemaking	Pouring a glass of milk	Preparing a simple meal
Shop and crafts	Tearing paper	Constructing simple household articles of wood, leather, ceramics, etc.
Physical education	Knowing up from down	Participation in supervised team activities
Orientation and mobility	Orientation to room	Traveling a known route
Reading	Gross tactual discrimination	Fifth-grade reading level
Writing	Putting paper in braillewriter	Grade 1 braille for some, grade 2 for others
Arithmetic	Grouping pegs	Handling money

TABLE 1

□ During the 1966-1967 school year, the administration became concerned about several of the multiply handicapped, teen-aged blind students who were scheduled to be terminated in June 1967 and there was no program which would bridge the gap between their life at school and their life in their local communities. It was felt that the vocational services in the students' home communities would have difficulty in providing the extensive services re-

Development of the Work-Experience Program

quired to enable them to be independent, self-supporting members of society. Recognizing these factors, the school administration sought the help of the local rehabilitation counselor for the blind.

After assessing the vocational needs of the older students, three basic groups, each requiring a different constellation of services, were identified. Even though these broad groups were identified, the needs of each student were unique and required individualization of the program.

□ 1. *High School Group*: The first group consisted of students attending a public high school while residing at the California School for the Blind. Most of these students were from rural areas of the state and, if they were to continue their high school training, they needed additional materials and tutorial services coordinated and provided by the director of advanced studies at the school for the blind.

The High School Group

In evaluating the high school program, it was found that the blind students were not able to take wood and metal shop and similar electives available to sighted students of similar ability. The value of such courses in the development of prevocational skills is self-evident. For several students, these courses were made available as an integral part of their school day through an arrangement with an orientation center for the adult blind in Albany. The acquisition of some shop skills and independent travel experience enabled them to make an additional step toward greater independence. During the following summer, several students obtained the experience of living away from the supervision of either home or school while gaining work experience at a community rehabilitation workshop. During their senior year, individual counseling was provided to help develop specific vocational goals.

□ 2. *Transitional Work-Experience Group*: The second group identified consisted of 16- to 19-year-old students who were enrolled in the ungraded junior high school program at the California School for the Blind. Limited though their abilities appeared to be in comparison with the high school group, they had developed sufficient social, self-care, and mobility skills to indicate some potential for becoming fairly independent adults. They could and did accept work assignments and responsibilities, such as taking a deaf-blind child to the infirmary, distributing school supplies to teachers, and operating the school's candy store. Academically, they were functioning between the fifth- and sixth-grade level, except in arithmetic skills which were generally lower.

Transitional Work-Experience Group

After talking with individuals in this group, it was evident that a concept of work, which is necessary for a meaningful discussion of vocational goals, was lacking. Meeting the demands of an employer for quality and quantity of production, accepting criticism, and relating to supervisors and co-workers were among the basic elements of such a concept that they did not understand. They also needed to experience some of the benefits of employment: earning wages, gaining the confidence of the employer, and receiving recognition from peers.

Concept of work was needed by many students

The Contra Costa Community Rehabilitation Workshop in Richmond afforded the opportunity to meet these needs. The workshop offered a variety

Workshop in Richmond used

of work tasks of differing levels of complexity. While continuing to reside at the California School for the Blind, which provided the measure of security needed, they traveled via public transportation to the workshop each day for six hours of work. The responsibilities thus assumed and the greater independence thus acquired led to the development of a greater sense of self-worth and self-reliance. Once this more positive image began to develop, it became possible to discuss and plan future vocational goals with them, and to take into consideration their demonstrated capabilities and limitations for employment.

□ 3. *Work Evaluation Group*: The third group identified were non-high school students, 16 to 19 years old, whose potential for living independently and for working competitively was questionable. Because their experiences had been greatly restricted, they were less aware of others and the outside world and, therefore, more preoccupied with their own needs. Their perceptions were more often restricted and distorted than those in the other two groups. Their level of functioning was midway between the extremes in each of the instructional areas outlined in Table 1.

In reviewing the needs of this group, the Department of Vocational Rehabilitation needed to determine the potential of these individuals for benefiting from vocational rehabilitation services. If these students had returned to their local communities without participating in a work evaluation program, they would, in all likelihood, have been excluded from vocational rehabilitation services on the basis of prior school records. However, because of the supportive assistance made available by the school and because there were a number of students needing similar services, the vocational rehabilitation counselor developed a work evaluation program for them.

□ To achieve the needed work evaluation, the workshop at the Walpert Center for the Retarded in Hayward was selected. The work tasks were at varying levels of difficulty but less complex than those at the workshop in Richmond. The enthusiastic and willing staff at the center kept the standards of competitive employment well in mind in evaluating their clients. Since they had had previous experience with public school programs for the retarded, they were quite willing and able to adjust to a half-day schedule, one allowing the students to return to the school for the blind for afternoon classes. Transportation was provided for these students, who were unable to travel independently.

Because there were more students in this group and because their problems were more severe, weekly group counseling sessions were initiated by the vocational rehabilitation counselor. The goal of this counseling was to relate the workshop experiences to the realities of non-sheltered employment. Because new clients with more severe emotional problems were included, the assistance of a psychiatrist was enlisted as co-leader with the rehabilitation counselor. Though the goal of the group remained oriented to the realities of work, the psychiatrist was able to help the clients in dealing with the stresses and frustrations aroused by their participation in a structured work setting.

Work Evaluation Group

Determining vocational potential

Workshop in Hayward Also Used

Group counseling was provided

□ During the first two and a half years of this joint project, there were several significant by-products of it. The small accomplishments initially achieved by the students began to change the attitudes and expectations of their peers and of staff members. These changes, in turn, effected more positive attitudes in the students themselves, enabling them to take yet another small step. This further growth stimulated and encouraged those working closely with the students and helped to establish a more positive pattern of expectation and achievement.

Secondly, a number of educators and rehabilitation counsellors who observed this pilot project were stimulated to develop similar programs. The project also made it clear that there was a need for a half-way house for the multiply handicapped in the community where necessary services are more available. Such a living arrangement has evolved and is currently serving the needs of several participants in this project.

After two and a half years of experience with the education and habilitation of multiply handicapped blind youth, there has been sufficient growth to warrant continuation of the project for all three groups. For example, several of the high school students, who in all probability would have been drop-outs, have acquired enough self-confidence and skills to be enrolled in junior college. Of those in the transitional work-experience group, two are now keeping homes for their husbands. Several have progressed to workshop employment in their home communities. Of those in the work-evaluation group, some have progressed to the Contra Costa workshop and, subsequently, to the Orientation Center for the Adult Blind in Albany. Several who were found to have insufficient skills to be employed in sheltered workshops have returned to their homes where their parents have been content to have them remain. Still others were not able to withstand the pressures of a work environment and their cases were terminated by both the school and the Department of Rehabilitation.

□ Although the results were not predictable at the inception of this joint effort, these examples illustrate the diversity of achievements and show that, in some cases, the ultimate objectives have not yet been obtained. Nevertheless, the following conclusions can be drawn from the experience:

1. It is clear that working with multiply handicapped blind students is a process requiring much time, a variety of services, and an individualized program. Although the capacity to live independently or to be self-supporting may not be obtainable goals for some, the gains made by the students do justify the time, effort, and money expended.

2. Services available for the multiply handicapped blind students do not meet the present need. Several studies have shown that the number of non-institutionalized multiply handicapped blind individuals is increasing. More attention must, therefore, be focused on developing adequate services.

3. Many supportive services were utilized throughout this project. Two staff members at the California School for the Blind (the vocational advisor who worked with the transitional experience group and the work evaluation group, and the director of advanced studies who assisted with the high school

Initial Gains in the Project

Project has been continued

Conclusions

group) were the liaison between the school, the Department of Vocational Rehabilitation, and the workshops. They spent considerable time helping to implement the programs. Without the availability of these individuals, the project would have had much difficulty in achieving its goals.

4. Individual and group counseling was provided to help the students to adjust to some of the demands of life as an adult. Unfortunately, the parents were not helped to recognize and accept these changes in their children. Future plans must include on-going group counseling for parents.

Counseling of parents is needed

5. It has been suggested that a workshop be developed on the California School for the Blind campus or that evaluative services be purchased from state-operated workshops for the blind. The experience of the project indicates that some of the progress made must be attributed to the interaction that these students had with sighted co-workers. It is felt that workshops not serving the blind exclusively provide a broadening, integrative atmosphere which better prepares students for adult life in the sighted world.

6. This project provided the school with an opportunity to adapt its curriculum to the new experiences afforded by the workshops. The Department of Vocational Rehabilitation was able to provide a program for the three groups at the school which would have been financially prohibitive if provided for each individual in his home community. Furthermore, the involvement of the Department of Vocational Rehabilitation at an earlier stage and over a longer period of time allowed the students to retain the security which the school could provide for them. This project also demonstrated that through such a joint effort, the California School for the Blind and the Department of Vocational Rehabilitation were more effective than either agency could have been working independently.

Cooperation of two agencies was necessary for success

Teaching Us to See

The following observations were made by Garry Wills, author of Nixon Agonistes, in his syndicated newspaper column of August 25, 1970. They are reprinted with the permission of Mr. Wills and of the copyright holder, Universal Press Syndicate.

In a museum courtyard the other day I saw a girl lead a blind young man from statue to statue; and he looked each one over, deftly, with his hands.

Some women, lunching in a room that looks out on the courtyard, clucked sympathetically to each other. They were museum ladies, who spend great

parts of their lives eyeing pictures and statues—everything about them proclaimed it. They wore large hats (the flower more grand as the stalk withers) as they rustled various crackly things down, crisp salads, brittle striated wedges of club sandwich. They felt so sorry for the blind boy that they had to avert their eyes.

Others, though, kept looking, and I looked at them, shared with them an odd experience. As the boy's hands paused here, patted there, edged past corners like climbers on a cliff, followed large curves confidently, or moved off a broken line into air (cheated of their expectations) and checked themselves—as he did all this, the statues took shape under his hands, revealed things we had not seen. His hands seemed to pour the metal back into invisible molds, or pare off excess bits of stone to form the statue's *exact* pattern. Before a skimpy modernistic thing, the boy pawed air all around, trying to find what little there was of it—and showed us that this statue was mainly a matter of absences, space cut through (and, in that sense, shaped).

When his hand closed over a Renoir woman's roughened breast, it gave the onlookers a strange tingle, one could feel the jolt travel through air, affecting each of us in turn. It was as if the statue had come to life, or been reclaimed—recreated, even—by Renoir himself, who worked it into existence, after all, by touch. The boy was teaching us what we had forgot, that the eye *should* move over that statue like a hand, have an almost tactile excitation as it sees. The blind man was teaching us to see.

It is the kind of episode that stays with one, seems a parable, teases one with meanings beyond the obvious.

New Retinal Disorder Is Being Investigated

According to stories last summer in the *New York Times* and in *Medical World News*, more than 300 young servicemen in the Army and Navy have lost most of their detail vision through the mysterious destruction of part of the retina. Called foveomacular retinitis, the disorder, according to specialists, looks very much like that produced by a solar burn. Although scattered cases of this nature have been reported during the last 30 years, the recent increase in the number of victims has occurred within the past three years. Actual solar burns have been discounted as the cause, because the loss of vision has usually been somewhat gradual. Army, Navy, and civilian doctors are investigating the problem in an effort to determine the cause. One hypothesis is that the disorder is a result of a spasm in the blood supply, causing cells in that part of the retina to die.

A Recreational Survey of Blind Persons

Who Are 60 Years of Age and Older

It has been estimated that, because of better nutrition, better medical care, and better housing, the average person who is now 65 years of age can expect to live at least 13 years more; those 75, eight years; and at 85, four years. This means that the average person will spend from 15 to 20 years of his natural life in retirement and several recent medical advances may shortly extend that period to 25 or 30 years.¹ It follows, therefore, that the need for recreation, an integral part of the "good life," will be on the increase and that meaningful, constructive programs must be planned and put into operation to meet this need.

□ Private agencies have been pointing to this fact for some time and the public, through legislative funding, has begun to show greater interest and concern. In Illinois, for example, provisions have been made to include programs for the aging (including, of course, those who happen also to be blind) in public facilities such as parks, field houses, public housing projects, etc. The Division of Community Services for the Visually Handicapped, Illinois State Department of Children and Family Services, as a part of its ongoing role as a direct service agency for visually handicapped persons and as a consultative agency on problems relating to blindness, has conducted a survey of the recreational interests and preferences of visually handicapped persons who are 60 years of age and older. The subjects of the survey were 161 individuals, or about 20 percent of the 807 aging, visually handicapped persons served by the Division in the Chicago-Cook County area.

These 161 individuals were selected at random from the Division's statistical listings of February 1969. Of these, 24 (10.5 percent) could not be interviewed because of the following reasons: death, 5; very ill, 8; moved out of state, 4; unable to locate, 3; and employed and unwilling to participate in the survey, 2. Of the final sample of 137 persons, 64 (47 percent) were male and 73 (53 percent) were female. This distribution seems to support the fact of the increasing longevity of females over males and some recognition should be given to this in planning any recreational effort.

From the schedule of 19 questions asked of each person in the survey, it was found that 28 percent of the males and 32 percent of the females knew the names and addresses of a recreational facility in their area. Fifty-three percent of the males and 40 percent of the females were interested in knowing the name and address of a non-commercial facility. Thirty-three percent of the males and 48 percent of the females preferred facilities in which the membership was predominantly visually handicapped persons. Concerning this preference, the interviewers noted the following reasons: "felt more comfortable around people with the same problem"; "like to be with their peer group";

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The Present Study

The sample

Knowledge concerning recreational facilities

"sighted people pitied them" or "regard them as inferior" or "infer that their blindness was due to some sin on their part"; "felt like an equal with a blind group"; and "likes to be among blind people because he has some vision and that gives him a feeling of superiority."

As is shown in Table 1, noon was the time of day most preferred for recreation by those surveyed.

Of the total group, 78 percent of the males and 80 percent of the females felt that they were healthy enough to participate in some form of recreational program, although some pointed out that the kind of activity would have to be limited because of such ailments as arthritis and "weakness in the legs." Others had difficulty in hearing and although hearing aids were used, some still had difficulty in large groups. They urged that the size of groups be limited to three or four persons because too many sounds produce distortion in the hearing aid and create a feeling of "nervousness." Some of the men suggested that the facility should provide for adjacent, adequate rest rooms because of kidney and prostate problems.

Despite the shortcomings in the use of visual acuity measurements in rating the usefulness of a person's vision, this criterion is still the one most generally accepted by both private and public agencies. For this reason, visual acuity measurements were used in this survey. As Table 2 shows, however, each individual was also asked to evaluate his overall visual efficiency by rating how well he could see. In addition to the good/fair/poor/blind ratings, several subjects volunteered further comments. A few considered their vision "totally unreliable"; some thought that they saw things which later turned out to be figments of their imagination. One person described his vision as being "diabolic," but refused to elaborate.

□ Eighty-three percent of the males and 82 percent of the females reported that before their loss of vision they had had some kind of hobby, including outdoor participation sports (fishing, boating, baseball) and indoor recreational activities (bowling, checkers, card-playing). Those who had not had a hobby volunteered such explanations as "too busy trying to earn a living," "too poor for such rich people pleasure," and "hobbies are a waste of time." After the loss of vision, 65 percent of the males and 73 percent of the females reported that they were still pursuing their hobbies. Those who discontinued their hobby activity explained that they were now too old, too sick, or too worried to think about old hobbies. A few said that they were using the time that they had formerly spent on hobbies to go from doctor to doctor and clinic to clinic in an effort to regain their vision. One or two others responded with "What hobbies could a blind man engage in?" Finally, it was observed that those who maintained a hobby interest after the loss of vision did so by a process of selection and adaptation: readers began using talking books, card-players used braille cards, and the very active took up social dancing.

Many of the individuals who knew of recreational facilities in their area did not make use of them. Their reasons for non-participation were: lack of transportation (30 percent); lack of funds (15 percent); poor health (40 percent); ambivalent (11 percent); and not interested (four percent). It was the inter-

TABLE 1

Preferred time for recreation

	% Males	% Females
Morning	14	12
Noon	39	55
Night	11	8
No preference	36	25

Size of groups preferred

TABLE 2

Visual efficiency as rated by the subject

	% Males	% Females
Good	0	1
Fair	24	14
Poor	53	55
Blind	24	31

Hobbies Before and After Loss of Sight

Reasons for not using known facilities

viewers' impression that through proper counseling, one of the services of the Division, most of the individuals who were ambivalent about recreational services could be motivated to participate on a more or less regular basis. Those in the "not interested" category gave the following reasons for their not wanting to investigate recreational activities: "concern and care for grandchildren takes up all their spare time"; "too old for that kind of nonsense"; "does not care for organized recreational programs"; "such programs made them nervous"; "does not care to associate with old people, young people made them feel young"; and "employed."

Of those individuals in the survey who were participating in some recreational program, only a few (five percent of the males and one percent of the females) made suggestions for changes in the program of activities. The consensus was that the programs would be more meaningful to them if there were more listening activities such as concerts, lectures, or choral groups. They also suggested that more outings such as picnics and field trips to museums and parks be planned.

□ Based on this writer's experience, recreational programs for integrated use by both blind and sighted persons can be an enriching experience if they are planned carefully and with understanding. In this survey, 17 percent of the males and 19 percent of the females were affiliated with such integrated programs. Most of these were in churches, nursing homes, YMCA, YWCA, senior citizen centers, and a few private clubs. The overall preferences and experiences of the individuals in this survey are presented in Table 3. The reasons given for preferring integrated programs included: "I feel depressed if there are too many blind people around"; "I have been sighted most of my life and I don't feel comfortable around blind people"; "an all blind group makes me feel helpless"; "I feel more secure and independent with sighted people around"; "being in an all blind group contributes nothing to learning to live in a sighted world."

In an informal survey of 106 of the 145 senior citizen centers listed in the guide issued by the Mayor's Commission for Senior Citizens in Chicago, it was found that only 20 percent of them had any blind persons listed on their rosters. The total number of blind persons involved was only 26.

□ Although there are no completely accurate statistics on the blind population of the United States, estimates have been made by various public and private agencies. The most widely adopted figure seems to be the one derived from the Hurlin study of the blind population of North Carolina in 1960, a figure which when projected gave a rate of 2.14 per 1,000 of the general population in 1965, or about 420,000 blind persons. This rate is the one used by the American Foundation for the Blind. Robert Scott, in his book *The Making of a Blind Man*,⁴ reviews the methodology of several surveys and concludes that the figure of 1,000,000, as set forth in the National Health Survey reports, comes closer to the actual number of blind persons in the United States. Despite the differences in the many estimates of the blind population, there does seem to be agreement on the fact that a majority of the blind persons in the United States are 65 years of age or older. This means that about one percent

TABLE 3
Affiliation preferences and experiences

	% Males	% Females
Would attend non-neighborhood facility	50	52
Have attended "integrated" (blind-sighted) facility	51	64
Prefer "integrated" facility	47	66
Prefer "integrated" facility with a sighted majority	28	49
Prefer "integrated" facility with a blind majority	33	48

Integration of Blind and Sighted for Recreation

The Number of Older Blind Persons

of all the aged persons in the United States have a visual impairment severe enough for them to be classified as "legally blind."

This survey revealed a serious gap in recreation services for the older visually handicapped person. In fact, the statistics resulting from this survey indicate that he is a "second-class citizen" in this respect. The primary responsibility for closing this gap lies with the agencies specializing in work with blind persons (a view supported by Scott) and the first step is finding out which individuals in the caseload of the agency want and are able to participate in some meaningful type of leisure-time activities. Unfortunately, the directors of recreation centers for the aged show, with very few exceptions, a lack of interest and understanding of the special needs of older blind persons and very little planning for his inclusion in activities. Even more unfortunately, agencies for the blind too often can only be of minimal assistance to directors of such centers because there is in general very limited knowledge and experience in recreational planning and programing available.

□ The Illinois Visually Handicapped Institute did at one time set aside a period of one month when older citizens lived at the Institute and were given help in cane travel and instruction in the "art of every-day living." They could also participate in group therapy sessions (under the leadership of a staff psychiatrist or psychologist) and engage in physical exercises and other leisure-time activities tailored to meet their needs. Staff from both the Institute and Community Services for the Visually Handicapped considered the program a success. The reactions of clients was also very favorable. Despite its success, the program was never repeated by the Institute, although plans are currently being made to re-establish it.

On the whole, very little has been written about recreational programs that can be modified and adapted to the special needs of blind persons and those that have appeared treat the subject in only the very broadest of terms. It is also true that very few agencies that specialize in work for the blind have adequate leisure-time activities for their elderly blind clients, if they have programs at all. It is clear, therefore, that services to the blind in the area of recreation must be strengthened immediately and there is no better way than to establish a knowledgeable committee to study the problem. This committee could use as a reference model the *COMSTAC Report*² or the "Hamlin" report,⁵ both of which make specific recommendations and lay down guidelines for service improvement. The report of such a committee could set a standard of excellence in recreational planning to which all agencies serving the blind could aspire.

The following is a partial listing of agencies which have in the past financed such projects: American Foundation for the Blind, Weiboldt Foundation, Rockefeller Brothers Fund, Irene Heinz Given and John LaPorte Given Foundation, Russell Sage Foundation, U.S. Administration on Aging, and U.S. Rehabilitation Services Administration. In addition to these steps, agencies should, as soon as feasible, add recreation specialists to their rehabilitation teams. The need for such a worker was recommended over a decade ago by Ralph Ireland³ and again in 1966 in the *COMSTAC Report*.² The most impor-

Gap in services

Experimental Program at IVHI

A study committee should be formed

Hiring recreation specialists

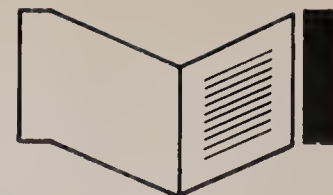
tant duty of such a specialist would be to interpret the special needs of visually handicapped persons to directors of leisure-time activities and to assist them in planning programs of mutual interest to an integrated—blind and sighted—group as a whole. He could acquaint the center directors with any special skills or talents than an individual blind person might possess so that he might have his chance to “shine” as a performer instead of being only a part of the audience. This could be valuable as a morale builder and in accelerating the acceptance of all on a basis of equality. Those clients who do not participate in leisure-time activities because of a lack of funds, transportation, etc., could be referred to the rehabilitation teacher for counseling, casework, or other services.

□ The survey conducted by the Illinois Division of Community Services for the Visually Handicapped points to a gap between need and services in recreation for elderly blind persons. It is assumed from these observation, inquiries, and discussions that the results of this survey are typical of the state of affairs in most areas of the country. Until this gap is bridged, therefore, all of us who work in agencies serving blind and visually handicapped persons should consider ourselves under a personal, as well as professional, mandate to redouble our efforts.

Conclusions

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A Head-Mounted Version of the Sonic Aid, by J. D. Armstrong. *The New Beacon* (Royal National Institute for the Blind, 224 Great Portland Street, London W1N 6AA, England), Vol. 54, No. 641, September 1970, pp. 227-31. An interim report on a comprehensive field study being sponsored by St. Dunstan's (England) on the head-mounted version of the ultra sonic aid.

Iverson Discusses Significant Changes in Educating Handicapped Children. *Perspective* (Illinois Department of Children and Family Services, 404 State Office Building, Springfield, Illinois 62706), Vol. 6, No. 2, Summer 1970, pp. 6-10. Highlights, in question/answer form, of an interview with Lee A. Iverson, director of the Division of Educational and Rehabilitation Services of the Illinois Department of Children and Family Services.

Deaf-Blind Students—Developing the Potential, by Robert E. Stewart, Jr. *Minnesota Welfare* (Department of Public Welfare, Centennial Building, St. Paul, Minnesota 55101), Vol. 22, No. 2, pp. 1-6. Mr. Stewart is head teacher in

the deaf-blind program at the Minnesota Braille and Sight Saving School.

The Vocational Rehabilitation Act Related to the Blind; The Hope, the Promise—and the Reality, by Burt L. Risley and Charles W. Hoehne. *Journal of Rehabilitation* (National Rehabilitation Association, 1522 K Street, N. W., Washington, D. C. 20005), Vol. 36, No. 5, September/October 1970, pp. 26-31. Mr. Risley is the executive director and Mr. Hoehne the assistant director of the Texas Commission for the Blind.

Etiology of Blindness in Nigerian Children, by Oyin Olurin. *American Journal of Ophthalmology* (Ophthalmic Publishing Company, 160 East Grand Avenue, Chicago, Illinois 60611), Vol. 70, No. 4, October 1970, pp. 533-40. Report on a five-year study (1964 through 1968) conducted at the University College Hospital of Ibaden, Nigeria.

How Rehabilitation Works. *Tennessee Public Welfare Record* (Department of Public Welfare, 410 State Office Building, Nashville, Tennessee 37219), Vol. 33, No. 5, October 1970, pp. 105-11. Six brief case histories, each written by the counselor involved, of the vocational rehabilitation and subsequent placement of blind individuals.

Promoting Jobs for People Who Are Blind, by Floyd Morgan. *Tennessee Public Welfare Record* (see address above), Vol. 33, No. 5, October 1970, pp. 98-101. Mr. Morgan, who is himself visually handicapped, works as an industrial specialist in placement of blind persons.

"Seeing" by Sound, by Gene Loughran. *The Rehabilitation Teacher* (National Braille Press, Inc., 88 St. Stephen Street,

Boston, Massachusetts 02115), Vol. 2, No. 10, October 1970 pp. 21-24. Reprinted from *The Christian Science Monitor* of June 10, 1970.) The author, a reporter for the New Zealand Broadcasting Corporation, relates his experiences in using Professor Leslie Kaye's mobility device, the "sonic spectacles."

Teaching Arithmetic Computation Skills, by Marian Lewis. *Education of the Visually Handicapped* (1839 Frankfort Avenue, Louisville, Kentucky 40206), Vol. 2, No. 3, October 1970, pp. 66-72. Report on a survey of residential schools and resource rooms on means of computation and grade level for introduction of computation methods.

Don't Rearrange the Classroom! Why Not? by Leo Glenn Randolph. *Education of the Visually Handicapped* (see

address above), Vol. 2, No. 3, October 1970, pp. 83-86. Mr. Randolph is orientation and mobility specialist at the Kansas State School for the Visually Handicapped. His article is subtitled "A Proposal for Meaningful Classroom Mobility."

IEEE Transactions on Audio and Electroacoustics, Vol. AU-17, No. 4, December 1969. Special issue on "Communication Aids for the Handicapped." Three articles are of special interest for the blind: "Reading Aids for the Blind," by F. S. Cooper and others (pp. 266-70); "Development Progress on a Microelectronic Tactile Facsimile Reading Aid for the Blind," by J. G. Linville (pp. 271-74); and "Reading Machine: From Text to Speech," by F. F. Lee (pp. 275-82). The issue sells for \$5 and may be purchased from the Institute of

Electrical and Electronics Engineers, Inc., 345 East 47th Street, New York, New York 10017.

—M. M. R.

Additional Listings

Modern Methods of Teaching Braille, by Claudell S. Stocker et al. Louisville: American Printing House for the Blind (1839 Frankfort Avenue, Louisville, Kentucky 40206), 1970. *Book One: Kansas Braille Reading-Readiness Book, Student's Text* (braille only, 1v., 51 p., 5-8285, \$2.20); *Teaching Manual* (braille, 1 pamph., 45p., 5-8286, 70c; print, 1 pamph., 16p., 7-8290, 40c). *Book Two: Braille Reading Simplified, Student's Text* (braille only, 1v., 46p., 5-8287, \$2.10); *Teaching Manual* (braille, 1 pamph., 36p., 5-8288, 70c; print, 1 pamph., 16p., 7-8289, 40c).

Answers to Accreditation Questions

National Accreditation Council for Agencies Serving the Blind and Visually Handicapped

Q. I understand that the National Accreditation Council has recently issued Standards for Production of Reading Materials for the Blind and Visually Handicapped. Where did these standards come from and how were they agreed on?

A. These standards came from many sources and were agreed on after a series of reviews. The whole process took about two years. This is how it was done:

Working committees were made up of men and women representing many viewpoints and disciplines who are professionally qualified and recognized leaders in their respective fields. The

committees brought together standards already in use and proposed others that seemed to be needed. They submitted their ideas to other knowledgeable experts.

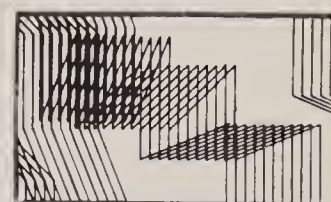
When drafts of the standards were all in hand, they were submitted to a National Conference on Standards for review and suggestions. Invited to the Conference were representatives of agencies that produce reading materials, agencies that utilize or supply reading materials, representative readers who use the various types of materials, plus various kinds of concerned specialists—ophthalmologists, optometrists, teachers, etc. Almost 200 people attended the conference and a number of those who

were invited but who could not come sent in their suggestions. In the light of all the suggestions, the working committees then reviewed and revised the standards.

Finally, in the fall of 1970, the standards were published. Since these standards will be revised from time to time, to keep up with new developments, NAC welcomes and will carefully note all comments and suggestions.

All of the above steps were also followed in developing the original body of NAC standards for the programs and operation of agencies and schools that serve blind and visually handicapped people.

The standards you will use in the



self-study of your agency or school are not, therefore, the product of a small group. They are the broadest possible consensus of knowledgeable people, drawn from all the groups concerned—users of service as well as suppliers of service and technical experts. *The COMSTAC Report* in which the main body of standards was first published, represents a distillation of the experience and thinking of well over 1,000 informed and concerned persons. The new standards for the production of reading materials were developed through a continuation of the COMSTAC method.

Q. We are a small agency. Should we try to include people from outside our agency on our self-study committee?

A. Yes, especially if yours is a small agency. This is your chance to involve selected professional and lay leaders

from your community whom you may not have involved before. It can also supplement the experience of your own board to provide the scope and depth you need in the self-study process.

Q. We plan to appoint a steering committee for our self-study. What, exactly, should the committee do?

A. First of all, it could establish a tentative timetable for your study and check periodically to see if the work of the subcommittee is proceeding on schedule. The whole study may take from four to 12 months depending on the size and complexity of your agency or school. Remember, you must allow both for factual investigation and for thoughtful evaluation.

Also, the steering committee might be given the job of reviewing the tentative reports of subcommittees and of

helping to resolve any conflicts that may appear in the reports of different groups before they are brought to the full study committee.

Third, the steering committee might carry specific responsibility for two sections of the study: "Section B, Agency and Community Profile" and "Section F, Evaluation Summary and Report." Since these give an overview of your agency or school, it would be natural to assign them to the steering committee.

What is your question about accreditation? Send it to the National Accreditation Council, Suite 1406, 79 Madison Avenue, New York, N.Y. 10016. If it is of general interest, we'll try to answer it in this column, but, in any case, you will receive a direct, prompt reply.

News in Brief

■ The 11th National Conference of the National Braille Association is to be held May 17-20 at the Pick-Congress Hotel in Chicago. The host for the conference is the Johanna Bureau for the Blind and Visually Handicapped, Inc., with the Braille Transcribers Club of Illinois, Catholic Guild for the Blind, and the Hadley School for the Blind acting as co-hosts. Workshops at the conference will be held on computer braille, music, foreign languages, and braille transcribing and teaching. More information is available from the publicity chairman, Mrs. Marcia Golde, 700 Elm Street, Winnetka, Illinois 60093.

■ The Catholic Guild for All the Blind, Newton, Massachusetts, will train some 40 men and women in the use of the ultra-sonic binaural environment sensor as part of a study supported by a \$29,500 grant from Seeing

Eye, Inc., Morristown, New Jersey. This device was developed by Dr. Leslie Kay of New Zealand, who is now a visiting professor at Boston College. As reported in this column last month, Boston College is currently conducting an extensive program of testing and evaluating the "sonar glasses," also with a grant from Seeing Eye, Inc.

■ As a result of legislation approved by the President on October 22, 1970, Veterans Administration hospitals have simplified procedures for admitting older veterans for treatment not related to military service. The new law removes, for certain groups of veterans, the requirement to certify that they are unable to pay for such hospital care. The requirement to sign the statement of inability to pay was removed for all vet-

erans who have reached 65 years of age or older, and for veterans who receive VA pensions. The new provision also applies to all veterans 65 or over seeking hospitalization without regard to whether they served during war or peacetime.

■ William V. Bridges, director of the Division for the Blind, Louisiana Department of Public Welfare, Baton Rouge, received the 1970 Seid Hendrix Award of the Louisiana Rehabilitation Association.

■ Qualified blind persons wishing to prepare themselves for a career in computer programming may now apply to the Hadley School for the Blind (700 Elm Street, Winnetka, Illinois 60093) for enrollment in a newly developed braille-by-mail correspondence course

on basic computer science. This course, which was developed under a grant from the International Business Machines Foundation, is, like all Hadley School courses, being offered without charge to the blind student. Applicants should have a high school diploma and, preferably, some college credits or other evidence of intellectual capacity.

Appointments

■ Toledo Society for the Blind, Ohio: **Barry McEwen**, rehabilitation director; **Mrs. Patricia Colburn**, instructor of techniques for daily living.

■ Association of the Junior Leagues of America: **Myron R. Chevlin**, executive director.

■ National Advisory Council on Vocational Rehabilitation, U.S. Social and Rehabilitation Service, new members: **Dr. Vernon L. Nickel**, medical director, Rancho Los Amigos Hospital, Downey, California; **Mrs. Alma Graves Kurtz**, speech clinician, Sewall Rehabilitation Center, Denver; **Mrs. Helen Walsh**, Institute of Rehabilitation Medicine, New York City; **Burt Leroy Risley**, executive director, State Commission for the Blind, Austin, Texas; **George Henry Lambert**, manager, Snell's Limbs and Braces, Baton Rouge.

■ National Council of State Agencies for the Blind: president, **Burt Leroy Risley**, executive director, State Commission for the Blind, Austin, Texas.

■ The President's Committee on Employment of the Handicapped: new member, **Nanette Fabray**, Pacific Palisades, California; special assistant for employer relations, **Vincent P. Hippolitus**, Arlington, Virginia.

■ Louisiana Department of Public Welfare, Division for the Blind, Baton Rouge: **Una Helen Guillot**, case supervisor for the blind.

■ Illinois Department of Children and Family Services, Division of Education and Rehabilitation Services, Springfield: **Lee A. Iverson**, director.

■ North Carolina State Commission for the Blind, Raleigh: **Wilbur E. (Sam) Early**, executive director.

Coming Events

February White House Conference on Youth, Colorado.

March 9-13 National Association of Hearing and Speech Agencies, Annual Conference, San Francisco.

April 4-8 American Personnel and Guidance Association, Atlantic City, New Jersey.

April 14-16 President's Committee on Employment of the Handicapped, Annual Meeting, Washington, D.C.

April 18-24 Council for Exceptional Children, 49th Annual International Convention, Miami Beach.

April 26-May 1 Association for Research in Vision and Ophthalmology, Annual Meeting, Lido Beach, Florida.

April 29-May 1 United Cerebral Palsy Associations, Annual Conference, Denver.

April 30 National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, Annual Meeting, Atlanta.

May 2-6 National Industries for the Blind, Spring Workshop, Fort Lauderdale, Florida.

May 9-12 International Association of Rehabilitation Facilities, Las Vegas.

May 16-21 National Conference on Social Welfare, Annual Meeting, Dallas.

May 17-20 National Braille Association, 11th National Conference, Chicago.

May 24-26 American Ophthalmological Society, Annual Meeting, Hot Springs, Virginia.

June 6-10 Special Libraries Association, San Francisco.

June 20-24 American Medical Association, Annual Convention, Atlantic City, New Jersey.

June 20-26 American Library Association, Annual Convention, Dallas.

June 22-23 American Diabetes Association, 31st Annual Meeting, San Francisco.

June 23-26 American Optometric Association, 74th Annual Congress, Houston.

June 27-July 2 American Physical Therapy Association, Annual Conference, Boston.

June 27-July 2 National Education Association, Annual Convention, Detroit.

July 18-22 American Association of Workers for the Blind, Biennial Meeting, Richmond, Virginia.

July 25-30 International Association of Applied Psychology, 17th International Congress, Liege, Belgium.

August 4-8 Blinded Veterans Association, 26th National Convention, Miami Beach.

October 25-29 50th Anniversary celebration, American Foundation for the Blind, New York City.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, San Francisco.

Sensi-Quik

The Touch Cane for Walking
Faster with Safety

The New Fiber-Glass Cane

Sensi-Quik's shaft is made of large diameter, tapered tubular fiber-glass with gleaming white pebble finish, and has a bright red band at its tip. The smart-looking contour handle is of black vinyl. The 1/2-inch diameter, diamond-hard, tungsten-carbide working tip resists wear, and produces sharp, useful touch information. The cane is put together with epoxy, as fiber-glass golf clubs are, to withstand repeated sudden impacts.

The Sensi-Quik fiber-glass model comes with either crook or contour handle and either carbide or replacement steel tip. Sensi-Quik is also available in high-strength, nickel-plated, steel shafts recommended for 50- to 60-inch canes when extra strength is desired. The steel shaft adds three to four ounces to the weight of the cane.

Canes are made on individual order in any length from 34 to 60 inches.

Developed and distributed by the Go-Sees, a non-profit corporation, Sensi-Quik canes are not sold. They are supplied to anyone who joins the Go-Sees and pays a membership fee of \$5. They are also available through agencies to individual trainees at a reduced rate of \$4 (they must be ordered in even-inch lengths).

Persons or agencies interested in the Sensi-Quik cane are invited to contact



Along with the Sensi-Quik cane, the Go-Sees provide an instructional manual entitled "Touch and an Occasional Tap." It is available on disk and tape and in braille and ink-print. In addition to stating the philosophy of the Go-Sees, the manual teaches the vocabulary of "cane talk words" that enable the traveler to respond quickly and deftly to the messages his cane picks up from the environment. The manual is available on loan from the address below.

Franklin S. Clark
The Go-Sees
166 East 92nd Street
New York, N.Y. 10028

THE NEW Outlook FOR THE BLIND

March 1971 Volume 65 Number 3

Articles

- 73 Learning From Experience: A Revisit to the Children's Corner
Susan S. Richards, O.T.R., Stanley Briller, A.C.S.W.
- 79 The Use of Psychological Tests in Diagnosing the Vocational
Potential of Visually Handicapped Persons Who Enter
Supportive and Unskilled Occupations
Edouard L. Wilson
- 90 Relationships Between Visual Acuity and Reading Medium
for Blind Children—1969
Carson Y. Nolan, Joan E. Bott
- 97 Reinforcement: One Teacher's Experiences and Experiments
With Multiply Handicapped Blind Children
Ann Levine Parker

Departments

- 100 Answers to Accreditation Questions
- 101 Current Literature
Mary Maie Richardson
- 102 News in Brief

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Learning From Experience:

A Revisit to the Children's Corner

The Child Development Group for young blind children at Community Services for the Blind in Seattle was established four years ago. Each year more has been learned not only about the needs of the blind child but also about the multiply handicapped blind child. The ongoing purpose of the program has been to stimulate the child to use all his senses—hearing, touch, residual vision—and to help him develop his physical and emotional capabilities.

Each year the total program has been enriched and developed as the experience of those involved has increased. The overall organization of the project has changed little since it was organized in 1966. The program consists of a parent counseling group, parent education group, child development group, individual parent counseling, and home training. The parent counseling group and child development group meet weekly. The program has been further consolidated and carefully directed towards important developmental goals which have been set up for the children in the group.

In 1966, the first group was composed of four girls and one boy, all under three years of age. They were carefully chosen children with parents who fully cooperated and by the following fall all but one of them had gone on to the preschool program conducted by the Seattle Public Schools.

□ The first year was truly experimental. For play equipment, simple textured objects which one would find around a home and playroom were used. Because most of the children had light perception, much of the equipment was brightly colored. There was a lamp on a low table which the children used in their play with shining or colored materials. Rhythmic music to stimulate movement was also a vital part of the activities. The children in this first group were all beginning to walk when they came.

The developmental objective was to help these children feel confident and interested enough in their environment to walk freely. No effort was made to identify objects but only to develop an interest in the sense of touch. Stimulation through tactile experience was used in every way possible. For example, the children were barefoot most of the time and so we often covered the floor with many kinds of material—rugs of different textures, cement blocks, corrugated paper.

The treatment in the development group is aimed at helping the child to realize his present abilities without considering his mental capacity. At the

SUSAN S. RICHARDS, O.T.R.
STANLEY BRILLER, A.C.S.W.

Mrs. Richards is leader of the Child Development Group and Mr. Briller is director of professional services, both at Community Services for the Blind, Seattle.

First Year Experiences

Developmental objective

This article is a sequel to "A New Program for Young Blind Children: A Cornerstone for Future Service," by Charles E. Brown, Stanley Briller, and Susan S. Richards, which appeared in the September 1967 issue of the *New Outlook for the Blind* (pp. 210-17).

end of the first year, all of the children were well on their way to walking and running and two were beginning to say words. In this initial group, it turned out later, there were three brain-damaged children. The exact neurological condition of a very young visually impaired child can seldom be determined in the early years. Thus, the parents' acceptance of their children as they are and their continued encouragement of them regardless of their physical and mental condition is important.

□ Though it is sometimes obscured and confused by precocious or unusual performance, there is a pattern of development which is the same as for a sighted child. The key factor lies in insuring that the blind child develops in the following sequence: first crawling, then walking around and climbing objects, and finally walking alone. It is much slower for a blind child to progress through these phases, but the consecutive order needs to be maintained regardless of age. Otherwise, the child may become confused and not be able to use his remaining senses constructively.

Young blind children are seldom able to relate to one another in a play situation, although they may do this out of necessity with their brothers and sisters at home. To begin, a one-to-one relationship with an adult is essential to the blind child. With the assistance of an adult, to whom the child becomes warmly related, he can gain knowledge of his environment. In the group, an adult can observe the child's growing interest in the playroom environment and help him find, or give to him, the kind of objects he might explore or play with. The adult can hold and give him the physical assurance he needs and reinforce his accomplishments with praise. Thus, the adult, through very personal contact with the child, provides many new experiences for him.

□ In the second year, the group was opened to multiply handicapped blind children. There were four rubella babies who were deaf and blind; three of whom were not yet two years old when they first started, while the fourth child was a year older. Only one of them walked; the other three crawled or rolled.

The program for the children at this point included work at the Speech and Hearing Clinic of the University of Washington. At the Clinic, the children were tested over a long period for the probable extent of their loss of hearing, and their mothers were instructed in ways of encouraging pre-speech sounds.

The play activities in the group were modified to fit the needs of the deaf-blind children. A good many of the activities of the children in this second group were correlated with what they were being taught at the Speech and Hearing Clinic. The speech therapists observed and discussed the development of these children with CSB staff, including what play materials were attractive to each child. The staff in turn learned the importance of stimulating interest in speech by letting the deaf child feel the throat and face of the adult talking to him and by talking to the deaf child even though he might not hear. Talking while working with the deaf-blind child is very important, as is conditioning to sounds such as a drum at bottle time and dancing to

Pattern of Development in All Children

The role of the adult

The Second Year

University Speech and Hearing Clinic

the rhythm of music. Such conditioning is additional insurance against the child's being (or feeling) isolated.

□ Since all of these children had good light perception, the lamp on the table was used even more to stimulate the children's interest in holding and examining objects. Colored cellophane paper, colored scarfs, anything that could be found that sparkled or that the children could look through at the lamp were used to stimulate the use of their residual sight. The play materials which made noise were not useful with these little children, except the tambourine and the drum; the tambourine had metal parts which sparkled and both instruments vibrated. The vibration of the drum was of unusual interest to them. They would lie down at bottle time and put their feet on the drum as it was being beaten.

It was found that it was even more important for the deaf-blind child to have continuous care from one special volunteer. The world of the blind child with a hearing loss is even more restricted than that of the blind child and he needs the presence of a person who understands his very special needs and his curiosity.

These children used their mouths and feet even more than the blind children for stimulation. They also began to use their hands for feeling large objects. One little girl, in order to get a complete idea of large equipment, such as a chair or rocking horse, would get under the object and feel its parts. These children used what vision they had to the utmost, peering at and examining play material with whichever eye functioned best under these circumstances. This enabled the staff to understand the practical aspects of each child's residual vision.

The second year of the program revealed several important facts which are applicable to blind children: 1) the use of rhythmic vibration in stimulating movement; 2) the use of light in a great variety of ways to stimulate residual vision; and 3) the importance of using all sensitive areas (lips, tongue, forehead, chin, feet and hands, palm and fingers) for exploring and learning and making sure to provide the freedom for this kind of exploration.

□ The third year (1968-1969) taught the staff that everything that had been learned could be put to use. New equipment was added to allow more freedom of movement for the children, which was of great importance because there were three children who were at first almost immobile. These children did not walk and seemed to have a poor body image. Making them walk was fruitless since they seemed to have little consciousness of their legs and feet. Use of the mat was important, because one child who was afraid to sit on the floor would sit up with pleasure on the mat. He rolled around and had his body stimulated by games of kicking and rolling. For example, he laid on his back and kicked against a board, enjoying the sound of his shoes on the board. With his parents' encouragement at home, he learned to crawl and then to stand up beside the couch and to climb. When he left the Child Development Group he could stand up and take a few steps without objection.

All three of the non-walking children were immobile, seemingly because

Use of Residual Vision and Hearing



The Third Year

Freedom of bodily movement stressed

they had been held continuously or had been set somewhere to play or be quiet. None of them liked to hold objects, nor did they explore with their hands. Since the experience had been that children, after becoming active in climbing and walking, begin to use their fingers for holding and touching, the emphasis in the group activities was on freedom of bodily movement rather than making the child touch and hold objects.

After walking freely, the child will really explore his environment using his hands meaningfully. During the first two years of the program, everything was done to stimulate the child's use of his hands, and the parents were also urged to do so. In retrospect, the child is unable to make full use of the tactile sense before walking. This is not to say that the pre-walking blind child should not use his sense of touch. On the contrary, ample development comes from the use of his mouth, lips, nose, cheek, forehead, and feet. He has a natural human curiosity which can be stimulated through tactile experiences. They make him interested in what is about him and help him move out into his environment. In moving about, he finds his fingers are the most satisfying tactually and gradually seems to drop the other methods of tactile stimulation. The full use of the meaningful sense of touch with the hand, therefore, is associated with the achievement of mobility.

Mobility and the use of the tactile sense

One of the most mobile children in the group was not yet three years old and had very little vision. She had had her mother's complete attention all her life and felt free and secure with other adults. She never needed just one adult to be with her but accepted help when she wanted it from any of the volunteers. One of the other children, who came from a large family, all of whom seemed to love her, also felt quite secure and became independent of adult help. Her problem lay in taking directions from an adult or in accepting limitations.

Mobility and security

Just to give the visually-impaired child the amount of general attention and help needed for security without arousing hostility to adult authority poses a problem. Control is a delicate issue since a visually impaired child must be able to explore freely, while at the same time he needs to learn that until he develops his own direction, the adult must be a source of help and control.

□ The selection of children for the group has evolved to the point where all children below three years of age have been able to enroll and to profit from the experience. In selected instances, children between eight and 18 months of age have been put into the group for some specialized work. This has been of help to families in which home training is not sufficient to induce enough change in the child's rate of development. To maintain effectiveness, five children still seem to be the maximum for this program.

Selection of Children

The parents group in the third year has become a source of change for the parents, a place where the parents can express their feelings about their children and often where they can find help in modifying their attitudes toward their children's accomplishments. One reason for the parents group becoming more effective has been the carry-over of key parents from one year to the next. Key parents are those who have the capacity and willingness to

The parents group

trust in their own ability to cope with their child's handicap, but who also truly want and expect help. The parents program has been expanded and enriched to include dialogue with school educators, legislators, and others who are in a position to increase the quality and quantity of community services available for blind children. It also includes visits to community resources such as schools and parks.

As planned from the start, each family has continued to be assigned to a social worker. The mothers are seen individually at regular intervals and some fathers have also participated. The contact between family and social worker has become regular and meaningful and each family accepts the fact that it has a social worker who can be supportive and helpful in making plans and decisions.

□ The third year has also enabled the staff to achieve consistency of structure in the use of the volunteers who care for the children in the group. These volunteers come as a unit from the Seattle Section of the National Council of Jewish Women, whose chairman assumes responsibility for there being an adequate number of volunteers. This continues to be an enthusiastic and serious group of young women, many of whom have stayed more than one year and have become well trained.

A volunteer usually chooses a child she would like to work with and a close relationship develops. If the choice does not seem to be working out, it is discussed openly in the evaluation meeting. This is part of the volunteer's training and occasionally a mutually agreed upon reassignment is made.

Volunteers and staff members who are working with the families and the children gather for a careful reading of the notes which have been taken during the morning and changes in goals and activities are discussed. The background knowledge of the social workers about what may be happening in a family helps in understanding the behavior of a child and his special needs.

Formal volunteer training has become more of an ongoing process. The volunteers participate actively in all discussions and are free to ask questions in the six training sessions. The meaning of these sessions is further realized toward the end of the year by a trip to the public school, when the volunteers see where the children may be going from our program. Finally, a review and summary concludes the year's work.

One value of the children's group has been the opportunity it furnishes for the volunteers and staff to observe the children's behaviors in the enriched environment of the playroom. It also furnishes an opportunity for the child to be different away from home. The variety of children's behaviors is important here. Because of the child's different behavior in the group, he is somewhat aware of his needs and seems to know that he is in the group to learn and develop. This is also beneficial for the parents who can observe other children who have problems similar to their child's and take encouragement from their progress.

A child's unhappiness or uncertainty in the program can be dealt with in the morning counseling group and with the help of the family's social worker. Family tensions, parental conflicts with the agency, or traumatic inci-



Staff and volunteers discuss each child

Observing the children

dents in the family also affect the children. If a child seems especially upset during a play session the mother can easily be contacted in the mothers group; she can sometimes shed light on why the child is upset. The relationships between all those connected with the project are friendly and cooperative, as attested to by the progress of the children.

□ In summary, going into the fourth year, the staff applied the following concepts specifically to the program for the children: play techniques emphasizing brighter, more highly textured materials; the use of light as an incentive for tactile exploration; the use of light to enhance residual vision; music to stimulate mobility and noisy toys to stimulate hearing; and the stabilization of security by the introduction or reintroduction of the one-to-one relationship.

One major aspect of child development that has been overlooked in the literature is the need for the blind child to develop the integrated use of both sides of his body in movement. This insures the smoother development of mobility as well as a clearer body image. With regard to the program for parents, the continued role of individual and group counseling of parents is necessary.

Increasingly complicated and demanding developmental problems have been faced over the three years and the children have shown progress over a short period of time.

Summary

New Device Transforms Light Signals Into Sound

The New York State Commission for the Blind and Visually Handicapped, through its Small Business Enterprises and in cooperation with Boonton Electronic Corporation of New Jersey, has developed a device for transforming the light signals of various meters and gauges into sound. Equipment for testing transformers, resistor meters and voltage meters, circuit analyzers, and measuring and weighing devices can be modified using the new device for visually handicapped workers.

Schematic drawings of the equipment, from which it may be constructed in any electronics shop, are available from the New York Commission, 1450 Western Ave., Albany, N. Y. 12203. The equipment itself is available for purchase (cost range: \$300 to \$500) to agencies for the blind from Natt Emery, Chief, Equipment for the Blind, 221 Rockhill Rd., Bala Cynwyd, Pa. 19004.

The Use of Psychological Tests in Diagnosing the Vocational Potential of Visually Handicapped Persons Who Enter Supportive and Unskilled Occupations

Psychologists have been developing aptitude tests that have been designed to predict occupational success for more than 50 years. For the most part, such tests have been developed, validated, and standardized on a sighted population. Because of the lack of norms for visually handicapped persons, there has been a reluctance on the part of many psychologists to utilize such test findings in diagnosing the vocational potential of visually handicapped adults. Even city boards of education, as well as hospitals, refer all visually handicapped young people who need a psychological evaluation to the rehabilitation agency which serves blind clients. Recent research has also revealed that agencies for the blind usually avoid administering many psychological tests which have been standardized on a sighted population for fear that the predictability of the test results are so skewed by blindness that there is little value in using such tests.

□ Programming psychological testing services, as has been just described, necessarily limits the utilization of many psychological tests, since the use or non-use of the test has been based upon the test itself rather than the individual who should have been given the test. Test focus is a very narrow, unfruitful, and unproductive method of using test results. Individual focus allows the psychologist more freedom in selecting appropriate psychological tests as well as a broader and more skillful interpretation of the performance of the visually handicapped person by integrating the test findings with the personality, sociology, physiognomy, intellectual, and occupational interest of the client. Such integration (provided the clinical judgments are accurate, reliable, and valid) allows for a sounder and clearer clinical approach to diagnosing vocational potential and should, in the end, aid in the better selection of people who enter semi-skilled and supportive occupations. Of the test-focused psychological reports that are seen in rehabilitation centers, many do not describe the aptitudes, interests, or achievements intrinsic to the client, but may go on, sometimes, into grandiose proportions to describe what the test has measured. On the other hand, the psychologist who has extremely fine clinical gifts should be able to uncover more specific and diagnostically valid impressions of how the person behaves and feels in the light of his reactions and responses to the standardized test.

To illustrate the point being made, let us examine a part of the intellectual evaluations in psychological reports on two different totally blind female

This article was originally given as a paper at the convention of the American Association of Workers for the Blind held in Toronto, Ontario, July 1968.

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The Programming of Tests

Examples from evaluations

clients. They were receiving rehabilitation services having a short-range vocational goal of sheltered workshop employment and the long-range possibility of later upgrading for entry into the unskilled competitive labor market.

□ Psychologist "A" wrote: "The client was administered the Weschsler-Bellevue Scale of Form II to reassess her current level of intellectual functioning. Whereas several years before, she functioned in the Dull Normal range, she now achieved at the Average level with an I.Q. of 96 on the verbal portion of the Wechsler-Bellevue Scale II. There was a very wide inter-test scatter, with rote retention and vocabulary or general language skills in the Bright Normal range. Prorating these two scores yields an estimated I.Q. in the Bright Normal range for this subject. Her fund of information, social comprehension, and abstract thinking, on the other hand, vary from low to high average and her problem-solving ability is in the mentally defective range. This latter skill seems severely attenuated by the subject's lack of formal schooling and resulting inability to deal with numerical abstractions. In summary, then, the trend of the client's intellectual development shows a decided increase in her functioning, especially in verbal areas and in rote memory skills."

In analyzing the above paragraph, the counselor is able to see the reason for the testing, the growth which has taken place since the last testing, the analysis of the test profile, the inferred level of predictive intellectual functioning, and the reason for the discrepancy in the functioning; however, the questions concerning her vocational potential, which should have been answered, are not considered. For example, what type of job setting could she function in, which type of work tasks does she seem to be able to perform, does she need very much supervision, and is she able to sustain work in a sheltered setting? Many questions that could have been answered were not.

□ Now, let us see what psychologist "B" wrote: "In responding to questions on the Verbal Scale of the Wechsler Adult Intelligence Scale, it was obvious that Miss M. has been severely penalized intellectually through economic impoverishment, poor and limited schooling, and a narrow, low-level, uncultured environment. Despite her obvious lacks, she exhibited some concern over her poor thinking abilities and did try to rationalize about them. She achieved a score which placed at the high-grade Mental Defective level; however, her language development indicated that she can possibly function as a Borderline-Defective person which means that she is capable of learning in a highly structured setting where the tasks she will have to perform are concrete, routine, and repetitive. She was unable to think in abstract terms; but, she does possess low-level, 'street' common sense judgment. Her memory is poor as well as her recall; yet, she can perform simple arithmetic problems with accuracy. It is felt that she could be trained to function at the sheltered workshop level."

The psychologist has made a diagnosis of Miss M.'s intellectual abilities, but, at the same time, has also given evidence to support the reasons for the diagnosis. In addition, mention was made of Miss M.'s concern about her abilities which could be used by the counselor in building the counseling re-

Psychologist "A"

Analysis of profile done by "A"

Psychologist "B"

"B's" diagnosis

lationship. Most significant was the spelling out of her potential to perform in a supportive occupation.

An excerpt from the counselor's summary reads as follows: "As I have been aware of Miss M's history, I was frankly surprised as to how easily she adjusted to our Diagnostic and Prevocational Program, and to how well she related to me. Our psychological report stated that she is of 'average intelligence in a social and worldly sense.' I would add to this that, although for academic purposes Miss M. is illiterate, I found her quite capable of grasping and handling matters of everyday life in a mature and reasonable way. I treated her accordingly, refrained at all times from any kind of probing, and in this way seem to have been supportive to her adjustment."

Miss M. has been placed in a sheltered workshop for the blind and all reports so far indicate that she is doing very well. The client reported on by psychologist "A" started in a work activity center last November. While she is of higher native intelligence, vocationally she is, at present, functioning below the level of Miss M. because of deficits in motor learning which were not spelled out in the psychological test report under the heading of intellectual functioning.

□ Let us now focus upon the actual tests. Tests are necessarily varied in nature and content so that it is sometimes difficult to classify or organize them. Without an adequate grouping of tests, classification becomes difficult, a fact which often distorts the diagnostic value of a test in job placement.

Ghiselli⁵ reviews the occupational validities of tests and states that the aptitude tests most commonly used in personnel selection and placement can be classified into five major types. The first includes tests of intellectual abilities: intelligence scales, as well as the group intelligence scales, such as the Otis. The group tests usually measure such factors as immediate memory, substitution (where the emphasis is upon the learning and application of a code), and arithmetic computation.

The second type are tests of spatial and mechanical abilities. The administration of such tests to visually handicapped clients is predicated upon the usefulness and adequacy of residual vision. The examiner should be concerned with the actual test performance and ability of the client to execute the task, so that time limits may not always be observed. Tests under this category measure spatial relations, spatial judgments, and location and mechanical principles. The Minnesota Paper Form Board can usually be successfully performed by partially sighted people. On the other hand, the MacQuarrie Test of Mechanical Aptitude is executed using a pencil and paper technique and would require excellent residual vision; it is felt that, in most cases, this test could not be included in a battery of tests designed for most visually handicapped clients. There is a test of mechanical ability which, although rarely used, could be successfully administered to the partially blind; it is the Bennett Hand-Tool Dexterity Test. Diagnostically, the results of performance using the spatial relations and judgment tests could be affected by neurological deficits.

The third type are tests which measure perceptual accuracy, such as the

Follow-up

Psychological Tests

Five types of tests

Tests of spatial and mechanical abilities

Tests of perceptual accuracy

Number Comparison or Name Comparison subtests of the Minnesota Clerical Test. Both of these subtests could be administered to blind persons who have enough residual vision to read print. Another possibility would be to have these subtests converted to braille. An oral presentation of the Number Comparison subtest could be attempted; such a procedure, however, would introduce the additional factor of immediate recall (memory), lengthen the administration time considerably, while placing the client in a passive testing position as well. The examiner would not be able to observe the manner in which the person approached and executed the task. It would be impossible to present the Name Comparison subtest in an oral manner.

Another type of perceptual accuracy aptitude tests are those that use the technique of cancellation. Such tests have a continuous series of numbers or letters arranged in random order. The individual must cross out all letters or numbers of a specified kind and good residual vision is usually required. Part I of the I.B.M. Aptitude Test for Programmer Personnel utilizes this concept, and it can be put into braille; the level of intelligence of the persons usually taking this test is much higher than those who enter supportive, unskilled, and semi-skilled occupations and are better able to cope with a test of this level of sophistication. Tests classified as pursuit are also used, such as the one included in the MacQuarrie Mechanical Ability Test. Such tests consist of a tangle of lines to be followed by the eye alone, one line at a time, from its beginning to its end. The lines are usually not too well-delineated so that only those persons with exceptionally good residual vision with no restriction in field could possibly execute such a test.

□ The fourth type are tests of motor abilities. Motor facility is necessary in the execution of many supportive and unskilled occupations and so measurement of this aptitude is usually essential enough to be included in any psychological test battery for a client who is planning to enter an occupation. Some of these tests absolutely require vision, such as the tracing tests which measure speed and precision of movement, tapping tests which measure rapidity of small hand and wrist movements, and dotting tests which measure all of the above-mentioned except that precision of movement is stressed. The manual dexterity tests may usually be administered to clients who have residual vision or who are totally blind by varying the instructions to employ tactile synthesis and guides. The finger dexterity tests usually include a pegboard, such as the Purdue Pegboard, a test of manual dexterity which utilizes training as well as industrial norms. The hand dexterity tests measure some finger dexterity, but, for the most part, they measure gross manual motions involving the use of the wrist. Such a test would be the Minnesota Rate of Manipulations Turning Test. This test, by the way, has standardized norms for use with visually handicapped clients. Arm dexterity tests measure very gross movements of the arms. The Minnesota Placing Test and the Stromberg Dexterity Test, which involve picking up blocks, carrying and placing them in another position, and placing the blocks in a box, are good tests of arm dexterity.

Personality testing has usually been the most inadequate part of a psy-

Tests using cancellation

Tests of Motor Abilities

Personality testing

chological evaluation of visually handicapped persons in the past because of the supposed restricted usefulness of projective techniques which have always required good vision. For the most part, the Thematic Apperception Test, Rorschach, Bender Visual Motor Gestalt Test, and projective drawing tests, such as the House-Tree-Person Test, have not been administered to visually handicapped clients. In many centers where clients who are blind are tested, personality inventories of the paper and pencil variety of incomplete sentences have been the only tests utilized in assessing personality and emotional problems. These instruments do offer many insightful avenues into the construct of personality; however, they have their limitations since in many instances, the test-wise client is able to skew the resulting profile by deliberately not answering some questions in a truthful manner.

Experience at the New York Association for the Blind has revealed positively that the Thematic Apperception Test, Bender Gestalt, and Projective Drawings can be administered to visually handicapped clients who are partially sighted with good residual vision, who are partially sighted with poor residual vision, who have light perception only, or who are totally blind. The Rorschach has been used with those who have fairly good to moderately fair residual vision. To date, it has not been used with totally blind clients.

□ The technique for administering the Thematic Apperception Test to a totally blind person requires that the psychologist select the cards appropriate to the sex of the client before the testing starts. When the client is ready for TAT testing, the psychologist starts off by saying, "This is a test of imagination, one form of intelligence. I am going to place in your hand some cards which have pictures on them, which I will describe to you. The pictures will be given to you one at a time, and your task will be to make up as dramatic a story as you can for each. Tell what has led up to the event you imagine is in the picture, describe what is happening at the moment, what the characters are feeling and thinking, and then give the outcome. Speak your thoughts as they come to your mind. Do you understand?" Once the blind persons understands the directions, the first picture is placed in his hand then the testing procedure proceeds along the same line that it does with sighted clients. A tentative clinical impression is that those who are adventitiously blind may respond more fluently to this test since the recall of situations when they were sighted may give them a more vivid imaginal resource upon which to rely.

Administering the TAT

To illustrate the type of projections or stories that the psychologist can receive, we can relate one given by a male client, 50 years of age, who was adventitiously blinded. To Card I, for males and boys, which shows a young boy contemplating a violin, he stated: "It's about three o'clock, and his mother had told him about a show he was anticipating attending. He is quite worried because there is a baseball game and it is quite imminent. At this point, his mother leaves the room. He leaves through the window and goes his merry way. During the game, he was hurt and he can't explain this to his mother who thought he was in his room practicing. His mother finds out and tells him he can't go to the show. He resents this and runs out of the house.

Example of a TAT story

The mother informs the dad. He tells her, 'Don't worry.' They do find him later at another boy's house where a movie is being shown. He is taken home and put to bed. He says his prayers. His parents kiss him, and bid him good night and into dreamland he goes."

An analysis of the story reveals that the client is an immature person who becomes anxious when worried. He is action-oriented and, without a strict structure, he will act out in a disobedient manner. He reacts by becoming physically hurt. Then he's punished and reacts by becoming resentful and by taking flight as a means of escape. The father reassures the mother. His parents give in and don't punish him. Instead, they show affection (inappropriately gratified) and the child engages in pleasurable fantasy. The diagnostic implication is of an anxious, spoiled child who is inconsistently handled by both parents. He acts out his feelings in order to control his parents (authority figures); ultimately he gains succor and love without feelings of guilt and escapes into pleasurable fantasy. Of course, an even deeper analysis could reveal his deep-seated dependency needs, inappropriate behavior to gain rewards, the use of fantasy as an escape mechanism, as well as his defiance of authority. This client gave six more very revealing and pithy stories which revealed a diagnosis of a paranoid personality problem with schizoid features so that it can be inferred that if the Thematic Apperception Test had not been administered to this client, much valuable diagnostic information would, in all probability, not have been revealed.

Story analysis

Projective Drawings, as well as the House-Tree-Person, can be administered using a Raised-Line Drawing Kit which is available from the American Foundation for the Blind. The Bender-Gestalt may also be used since the psychologist is able to trace the design onto the transparent paper using the stylus to produce a raised line design. Through tactile means, therefore, the client can perform the test. It should be brought out that congenitally blind as well as adventitiously blind clients have reproduced drawings that were consistent with those seen in the sighted population. For example, the brain-damaged client has produced drawings where perseveration, angulation, closure difficulties, perceptual distortion, and poor motor control were easily observable.

Tests using drawings

□ Intelligence testing utilizing the verbal portion of the Wechsler-Bellevue Scales has long been included in batteries for blind clients; however, performance tests have not. The Haptic Intelligence Scale for Adult Blind, copyrighted in 1964, which parallels the performance subtests of the Wechsler-Bellevue Scales, has been successfully employed in testing blind clients who were interested in technological and industrial occupations. Likewise, the Stanford-Kohs Block Design Test and the Ayres Space Test can be used in testing blind clients. Since intelligence does not play a major role in the execution of many supportive and unskilled occupations, the Wechsler-Bellevue verbal scale score in many cases gives a sufficient diagnostic index of the client's ability to learn and think. Scales which have been developed for use with the blind are relatively culture-free and do provide insightful diagnostic information; yet, this writer feels that, because of the length of time needed to administer these tests and the usually poor performance of those clients

Intelligence Testing

who are limited intellectually, these tests need not necessarily be included in a diagnostic test battery for clients aiming for supportive and unskilled occupations. These tests do have considerable diagnostic potential for revealing the aptitude of clients who will enter technical and some scientific occupations and computer programming.

□ Tests that measure occupational interest also provide valuable insights into the personality needs of clients. Such tests as the Lee-Thorpe Occupational Interest Inventory, Thurstone Interest Schedule, Minnesota Vocational Interest Inventory, Kuder Preference Record, and the Strong Vocational Measures of Interest, can be used to secure an interest profile. For clients who enter supportive and unskilled occupations, these inventories are usually of a somewhat high academic and reading level so that their usefulness in all cases is somewhat questionable. The Minnesota Vocational Interest Inventory for males is geared toward industrial occupations and appears to be more nearly aligned with the interest of this group of clients. Research is definitely needed to develop measures of interest to tap more adequately the interests of these clients. Skilled interpretation is needed if these tests are to provide useful counseling and placement information.

Once the testing has been completed, its value in the prediction of occupational success has to be measured. A test becomes a useful and valid instrument for selecting workers when the results of the test indicate that those workers who achieve high percentile ranks on the test have the greatest potential and will perform better on the job than those in the lower ranks. A criterion is selected as an index by which occupational success is predicted or measured by a valid test. The more valid the test is, the higher will be the relationship of the scores on the test with scores on the criterion. In the selection of blind clients who enter supportive and unskilled occupations, high percentile ranks are not usually achieved by many of the clients if they are measured by test norms standardized on a sighted population; therefore, clinical judgments and sometimes educated guesses, based upon a knowledge of the aptitudes which are being measured, must be expertly made.

□ Rehabilitation and placement counselors should all know that aptitude measurement focused upon eventual job placement has taken much of the guesswork out of job placement. Through hit-and-miss selection techniques, many valuable man hours have been wasted in placements in a number of supportive and industrial occupations. Therefore, it is important for the psychologist who works in a rehabilitation agency serving visually handicapped persons to understand the occupational structure and stratification of supportive and industrial occupations. For the most part, industrial occupations at the semi-skilled and unskilled level fall into five categories: machine tenders, such as punch press operators; bench workers, such as assemblers; inspectors, such as battery inspectors or gauge inspectors; packers and wrappers; and gross manual workers who are usually unskilled laborers. From a theoretical, if not experiential, viewpoint, it could be inferred that the only occupational category which would pose a question of suitability for the visually handicapped person would be inspection, since inspection jobs usually require a high degree of visual acuity. There are, however, even some inspec-

Occupational Interest Tests

Validity of test results

Psychologist Should Have Knowledge of Occupations

Categories of semi-skilled and unskilled occupations

tion jobs, if studied analytically and carefully, which could be successfully executed through the use of tactile means. For example, in some electrical assembly work, the inspector simply places a gauge or similar gadget into an electrical circuit and if a light goes on, the item is cleared as having been correctly assembled. This type of electrical assembly inspection could, in all probability, utilize an audible or tactile signal to inform the blind person of the correct or faulty assembly of the product.

Ghiselli⁵ points out that industrial occupations comprise the bulk of semi-skilled and unskilled occupations. The work usually requires a limited training period. The tasks are primarily manual and perceptual in nature; however, some require a limited type of mechanical knowledge. The research reveals that tests of intellectual, spatial, mechanical, and motor abilities predict very well the potential for training for these jobs. Tests of perceptual accuracy have less predictive value. Not all aptitudes that would appear to be significant in predicting successful entry into some jobs have real value. Machine tending ability can be predicted to some degree by hand dexterity and cancellation tests, but tests of perceptual accuracy and intellectual motor, spatial, and mechanical abilities have very little predictive value. Bench working, which requires the assembly of parts into larger units, is predicted well by tests of motor abilities. Tests of hand and manual dexterity, which also measure motor abilities, usually play a significant part in successfully screening clients able to be successful bench workers. Measures of spatial and mechanical abilities, as well as perceptual accuracy, do not play a significant role in the predictability of vocational success; tests of intellectual abilities are even less significant. Arithmetic tests usually have a fair substantial validity, as was seen in the client tested by psychologist "B," above.

There is very little information about the types of aptitude tests which predict success in inspecting jobs. It appears, however, that tests of mechanical and spatial abilities do have quite a bit of value in such situations while tests of motor ability appear to have no significance.

□ The last group of workers are those doing gross manual labor and requiring very limited training and very little or no skill. Intelligence tests have been studied and have been found to have absolutely no value in predicting success in training as a gross manual worker. This means that the past emphasis placed upon the I.Q. of bench workers has been unjustified. This does not mean that other complicating diagnostic difficulties such as brain damage, other neurological deficits, and severe mental and social retardation may not contraindicate training. It does mean that where there is low intelligence without such complications, the chances are that the person can be trained to perform gross manual work, such as the client who was tested by Psychologist "B." It appears that motivation, a healthy defense system, good practical judgment, and impulse control are excellent diagnostic indicators of potential success in the performance of gross manual tasks.

Rehabilitation and placement counselors should also be aware that the visually impaired person is usually thwarted in his efforts to enter the labor

Use of tests in predicting potential job success

Success in Gross Manual Labor

Entering the labor market—problems

market because of: 1) his sometimes total lack of potentially marketable skills; 2) an under-assessment, as well as a lack of understanding, of his aptitudes based upon counselor-given, sighted industrial norms; 3) a limited knowledge of the vast number of jobs which could be performed by a qualified visually handicapped person; 4) a poor image of his potential for work, one which is often magnified out of proportion by parents, teachers, the general public, and sometimes even personnel in rehabilitation centers; and finally, 5) the inability to develop the motivation which is necessary for competing in an industrial work setting. During the initial psychological testing, the clinician should select tests which will assist, along with a collateral interview, in uncovering as many of the aforementioned problems as possible in order to diagnose properly the counseling needs of the visually handicapped person.

In 1953, Colonel E. A. Baker of the Canadian National Institute for the Blind said, "In this work, we should not be too ready to limit the potentialities or the range of services to be made available. Who can predict at this stage where we will go. We must keep our minds open and pliable, looking to an even more distant horizon, beyond what we can imagine. When we have reached the stage where we cannot do this, we should retire, and if we do not recognize our frozen limits, I hope someone will tell us."²

□ Fifteen years later, the echo of these words still remains with us for, as I have tried to point out in this paper, the potentialities of blind clients cannot, and should not, be predicated solely upon statistically reliable aptitude tests. We must also consider the individual who, in coping with his blindness, must contend with the resistance to change which is inherent in the human personality; modify his own stereotyped thinking about the jobs available to blind people and cope with his irrational feelings concerning blindness; deal with the minority-group aspect of blindness and its concomitant feelings of inferior status and of personal devaluation; override anxiety stemming from the press of today's world tensions; and, finally, overcome the dependent status which usually accompanies blindness before the client is able to bring these feelings under control. Psychological testing usually precedes vocational rehabilitation planning so that, in diagnosing the vocational potential of the visually handicapped client who will enter a supportive or unskilled occupation, the psychologist must focus his attention clinically upon the individual and his needs. Only then will psychological tests prove their usefulness as predicative diagnostic measures of vocational success.

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Readers Help Restore Newspaper Handling of Newsweek Talking Magazine

Last summer, the Post Office Department removed *Newsweek Talking Magazine* from its list of periodicals receiving "newspaper handling." Instead of being delivered promptly, because of the timeliness of its news content, the talking book edition of *Newsweek* was delivered as parcel post. This change was soon evident to the blind and other handicapped readers. At least two blind persons, however, took swift and, as it developed, effective action.

Mrs. Margaret W. Rockwell of Silver Spring, Maryland, wrote to Senator Gale McGee (D-Wyo.), chairman of the Senate Committee on Post Office and Civil Service. Robert Funk of Penfield, New York, called the situation to the attention of Representative Frank Horton (R-N.Y.). Both Congressmen took the matter to Postmaster General Winton M. Blount who, in a letter to Senator McGee, replied:

I have just issued instructions that sound recordings for the blind of current printed news are to receive the same handling as that given to newspapers. The earlier decision to withdraw newspaper treatment of the *Newsweek Talking Magazine* was made on the grounds that . . . such mail must consist of "printed sheets."

After a careful review, however, I am convinced that . . . unless certain delivery priorities are given this material, the blind and other handicapped persons would be at a disadvantage with respect to obtaining current news.

Newspaper treatment will now be afforded to sound recordings for the blind when they are regularly issued as reproductions of printed material which is entered as second-class matter, and which itself is given "newspaper treatment" under the provisions of Section 126.41 of the Postal Manual.

The Postmaster General's reply

Congressman Horton was praised by Gibson McCabe, president of Newsweek, Inc.: "Your prompt action in getting the Post Office Department to change its ruling as to the handling of *Newsweek Talking Magazine* is very much appreciated by us here at Newsweek. . . . The withdrawal of the newspaper treatment . . . was very serious." He went on to point out that each of the 10,000 copies of the recorded edition of the magazine is read by 10 to 12 blind persons. In closing, McCabe writes, "Your warm and human reaction has resulted in prompt delivery of the news to some 100,000 blind people all over the country."

Praise from Newsweek, Inc.

National Eye Institute Reorganized

After almost a year of operation under an interim organizational structure, the National Eye Institute (NEI) in Bethesda, Maryland, has been reorganized to enhance its capability for conducting and supporting research aimed at improved prevention, diagnosis, and treatment of visual disorders. The reorganization of the Institute, part of the National Institutes of Health, includes the establishment of an Office of Biometry and Epidemiology within the Office of the Director; the establishment of the Office of the Director of Intramural Research; and the creation of a Laboratory of Vision Research and a Clinical Branch.

□ The Office of Biometry and Epidemiology will conduct mathematical and statistical research on vision and its disorders. It will also plan, conduct, and analyze field investigations, clinical trials, and population studies on the incidence and prevalence of ocular diseases and associated demographic factors. Harold A. Kahn, formerly with the National Heart and Lung Institute, has been appointed chief of the Office of Biometry and Epidemiology.

Office of Biometry and Epidemiology

□ The Office of the Director of Intramural Research replaces the Office of the Associate Director for Research Programs. Serving as a principal advisor to NEI Director Dr. Carl Kupfer, the director of intramural research will be responsible for administering the Institute's laboratory and clinical research activities. He will participate in planning, policy formulation, and program coordination of intramural research and research training programs. The Office will also provide research support services to the Institute's Bethesda research program.

Office of the Director of Intramural Research

□ The Laboratory of Vision Research, and the Clinical Branch, replace the Ophthalmology Branch. Laboratory studies range from the biochemistry and physiology of the visual process to investigations of the pharmacology of new drugs for treating visual disorders. Patient studies, under the direction of NEI Clinical Director Dr. Vernon G. Wong, include the development of new ways of preventing, diagnosing, and treating glaucoma, uveitis, and various retinal and corneal disorders.

Laboratory of Vision Research and Clinical Branch

Relationships Between Visual Acuity and Reading Medium for Blind Children—1969

Since Jones' initial study in 1961, it has become the practice to review every three years the relationships between visual acuity, reading medium, grade level, and type of educational program for legally blind children. This practice has been stimulated by the shifts in relationship observed over three-year intervals and by improvements in the data collection system. Equally stimulating has been the possibility of influencing these relationships through special visual perceptual training.^{1,2,3}

These studies^{4,5,6} were based upon data gathered by the American Printing House for the Blind and were obtained in 1960, 1963, and 1966 through registration of legally blind children under provisions of the federal act entitled "To Promote the Education of the Blind" as amended by Public Law 84-922. The study reported in this paper represents a replication of these studies based on data gathered as of January 1969.

□ The forms for registration of legally blind children require recording of the name of the school system, the names* of legally blind children enrolled in the system, the grade level of each, the degree of vision in each eye with correction as reported by an eye specialist, and the reading medium employed by each child. In 1969, reading media categories included on the form were braille, braille and large type, large type, large type and normal inkprint, normal inkprint, auditory media, and none.

In the present study, students were categorized by type of school system attended, grade level, predominate reading medium, and visual category. Assignments to visual categories were made on the basis of corrected vision in the better eye. School categories included public day schools, residential schools for the blind, commissions for the blind, and residential programs for the multiply handicapped blind. Students educated under commissions for the blind might be enrolled in either day school programs or residential schools for the blind.

□ The visual categories used in this study are identical to those used in the previous study, but have been slightly modified from those used in 1961 and 1963 to make them correspond to the visual notations suggested in the *Eye Report for Children with Visual Problems* published by the National Society for Prevention of Blindness. These categories are as follows:

* The identities of individual children registered as enrolled in educational programs throughout the United States are considered as privileged communications and are not available for public use.

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Sources of Information

The present study

Nine Visual Categories

Category	Visual Acuity or Designation	Category	Visual Acuity or Designation
I	20/200-18/200	VI	counts fingers
II	17/200-13/200	VII	hand movements
III	12/200-8/200	VIII	light projection or perception
IV	7/200-3/200		
V	2.5/200-.4/200	IX	totally blind

As before, gross groupings of children were made in order to create sizable numbers within categories. All visual acuities, regardless of their initial base, were recomputed to the base 200. The "counts fingers" category (VI) includes children whose vision was noted at "C.F." The category "hand movements" includes children with notations of "H.M.," "gross form," and "object perception" regardless of the distance involved. Category VIII includes children whose vision was noted as "light projection," "light perception," or "L.P." The classification "totally blind" included those reported as such as well as reports of "none," "enucleated," and "prosthesis."

The total registration of legally blind students in 1969 was 20,512. For various reasons not all students could be fitted into the above classification system and consequently this study is based on data describing 19,879 children. Among those omitted were 390 adult students, which compares with 296 adults omitted in 1966. Also omitted were 184 children reported as having restricted fields of vision. One hundred eighty-three such children were omitted in 1966. Fifty-nine children were omitted because of ambiguities in reporting. This compares quite favorably to the 172 so reported in 1966 and reflects technical improvements in the reporting system.

□ School systems continued to change in enrollment. Residential programs for multiply handicapped students changed most, increasing by 29 percent, from 268 students in 1966 to 345 students in 1969. The number of students educated within programs controlled by commissions for the blind increased by 15 percent, from 663 students in 1966 to 763 in 1970. Local school enrollment increased by 11 percent, from 10,385 to 12,049 over the three-year period. Uniquely, residential school programs decreased in enrollment by two percent over the three-year period, falling from 6,886 students to 6,722. These data are presented in Table 1.

Table 1 also presents the distributions of students according to their degree of vision within the four kinds of school systems. The distributions of these proportions for local, residential, and the total group do not differ significantly from those reported in previous years. Generally, across visual categories, most changes were observed in the more severe visual categories. The shifts were minor losses in percentages in the severe visual categories and minor gains in the less severe categories.

Based on these data residential schools are characterized by a population of relatively low visual acuity, while the local school systems have populations of high relative visual acuity. The commission schools also have populations of high relative visual acuity. The most severely handicapped population, however, is that in the multiply handicapped residential programs where 80 percent of the students fall in the three lowest visual categories. Basically, this is the same pattern displayed over the previous years.

Subjects

Shifts in Enrollment

Degree of vision and school systems

School System	Visual Categories									Total N
	I	II	III	IV	V	VI	VII	VIII	IX	
1966										
Residential	.17	.03	.08	.05	.02	.09	.05	.21	.29	6,886
Local	.48	.06	.11	.04	.01	.04	.02	.09	.16	10,835
Commissions for Blind MH	.38	.06	.11	.04	.01	.05	.03	.12	.18	663
Residential	.08	.00	.02	.01	.00	.01	.04	.24	.59	268
Total N	6,690	928	1,819	860	195	1,065	529	2,544	4,022	18,652
Proportion	.36	.05	.10	.05	.01	.06	.03	.14	.22	
1969										
Residential	.18	.04	.09	.07	.02	.08	.04	.19	.29	6,722
Local	.49	.05	.12	.04	.01	.04	.02	.07	.16	12,049
Commissions for Blind MH	.42	.06	.12	.03	.02	.06	.02	.10	.17	763
Residential	.11	.01	.01	.02	.01	.05	.06	.23	.51	345
Total N	7,463	955	2,164	946	226	1,098	522	2,328	4,177	19,879
Proportion	.38	.05	.11	.05	.01	.06	.03	.12	.21	

□ The shift away from braille reported in the previous comparisons^{5,6} continues at an undiminishing rate. In 1960, 58 percent of the children registered were reported as braille readers in contrast to 39 percent so reported in 1969. Between 1966 and 1969, the number of braille readers dropped seven percent, the number of students using large type remained stable at 36 percent as did that for braille and large type readers (four percent); the number of individuals using both large type and inkprint increased by four percent; the number of inkprint readers increased by one percent; and auditory readers increased by three percent. In the three lowest vision categories, the shift appeared to be from braille to auditory media. In the six highest visual categories, the shifts appeared to reflect the emphasis on increased use of vision commented upon in the earlier studies. In the four uppermost categories, the shift from braille to large type continued, but at a rate insufficient to compen-

TABLE 1
Distribution of Students According to
Degree of Vision Within
School Systems

Mode of Reading and Degree of Vision

Reading Mode	Visual Categories									Total
	I	II	III	IV	V	VI	VII	VIII	IX	
1966										
Braille	.07	.13	.18	.36	.59	.52	.83	.93	.95	.46
Large Type	.64	.63	.56	.42	.29	.33	.09	.02	.00	.36
Braille & LT	.04	.06	.09	.11	.07	.08	.03	.01	.00	.04
LT & Print	.15	.10	.09	.07	.01	.02	.01	.00	.00	.07
Inkprint	.08	.06	.05	.03	.02	.02	.00	.00	.00	.04
Auditory	.01	.02	.02	.02	.02	.02	.04	.03	.04	.02
1969										
Braille	.04	.08	.15	.36	.46	.45	.71	.88	.88	.39
Large Type	.59	.60	.55	.39	.35	.36	.11	.02	.00	.36
Braille & LT	.04	.05	.08	.11	.08	.08	.03	.01	.00	.04
LT & Print	.21	.16	.13	.07	.04	.05	.02	.00	.00	.11
Inkprint	.10	.09	.06	.03	.04	.02	.01	.00	.00	.05
Auditory	.02	.02	.03	.04	.03	.04	.12	.08	.11	.05

TABLE 2
Comparison of Distributions of
Mode of Reading by Visual Categories

sate for the shifts of readers in the direction of inkprint. Consequently the number of large type readers in these categories diminished approximately three percent over those reported in 1966.

Table 3 compares large type readers when grouped by visual level and school system. The changes in 1969 were not as drastic as some observed in previous years, although the trends are consistent. Residential schools have increased their use of large type over most categories while local schools have decreased their use of large type especially for levels I-IV. Level V recorded a significant gain, however. Now, more than ever, the proportions of large type readers in local and residential schools parallel each other. Commissions significantly decreased their students' use of large type in the visual levels I-IV, but increased the proportion of students using large type in levels V-IX. Residential programs for multiply handicapped students decreased the proportions using large type over most visual levels.

Large type by school and visual level

School System	Visual Categories								
	I	II	III	IV	V	VI	VII	VIII	IX
1966									
Local	.67	.69	.63	.50	.40	.41	.14	.03	.00
Residential	.64	.57	.49	.32	.22	.28	.06	.01	.00
Commission	.17	.21	.19	.27	.00	.17	.05	.01	.00
MH Residential	.29	1.00	.40	1.00	.00	.50	.09	.02	.00
1969									
Local	.61	.61	.60	.47	.50	.41	.12	.04	.00
Residential	.64	.66	.51	.31	.25	.31	.09	.01	.00
Commission	.05	.17	.10	.25	.33	.23	.12	.05	.00
MH Residential	.23	.50	.40	.67	.00	.38	.47	.01	.00

TABLE 3
Comparisons of Proportions of Large Type Readers by Visual Level for School Systems

Table 4 represents the proportions of braille readers in the various school systems. The local and residential schools continued to decrease the proportions of students using braille as was observed in 1966. Commission schools followed the same pattern. The residential schools for multiply handicapped were more erratic. While the majority of the change was decreased use of braille, there were also significant gains in certain categories. Residential

Braille Readers, Visual Category, School Systems

School System	Visual Categories								
	I	II	III	IV	V	VI	VII	VIII	IX
1966									
Local	.04	.07	.10	.25	.51	.42	.72	.91	.94
Residential	.22	.30	.35	.52	.68	.62	.92	.97	.99
Commission	.01	.02	.07	.12	.38	.28	.38	.72	.81
MH Residential	.29	.00	.00	.00	.00	.00	.45	.55	.60
1969									
Local	.02	.06	.08	.25	.32	.36	.61	.84	.85
Residential	.13	.14	.32	.49	.59	.56	.82	.95	.97
Commission	.02	.00	.04	.08	.25	.21	.50	.72	.74
MH Residential	.03	.25	.20	.00	.00	.19	.11	.36	.45

TABLE 4
Comparisons of Proportions of Braille Readers by Visual Level for School Systems

schools still show disproportionate numbers of students in the higher visual categories using braille.

□ The proportions of students possessing vision of object perception or better or light perception or worse are presented by school systems in Table 5. For the first time since these data were collected in 1960, the proportion for local residential schools have changed. In both systems, the proportions of students falling in the more severe levels decreased with a complementary increase in less severe levels. The same observation can be made for the residential programs for the multiply handicapped. The discrepancy between the proportion of students with less visual acuity enrolled in the multiply handicapped residential schools and the other systems still remains.

<i>School System</i>	<i>Visual Categories</i>	
	<i>I-VII</i>	<i>VIII-IX</i>
1966		
Local	.75	.25
Residential	.50	.50
Commissions	.69	.31
MH Residential	.18	.82
1969		
Local	.77	.23
Residential	.52	.48
Commissions	.72	.28
MH Residential	.26	.74

□ The degree to which use of residual vision is stressed among school systems is illustrated by the data in Table 6 which reflect the reading media used by students having vision of object perception or better. In 1966, the local schools reported large type as the medium used by the majority of their students in this visual range. However, by 1969 local schools show more diversification with increased use of inkprint and auditory media. The residential programs have decreased emphasis on the use of braille by eight percent since

<i>Reading Mode</i>	<i>Local</i>	<i>Residential</i>	<i>Commission</i>	<i>MH Residential</i>
1966				
Braille	.10	.43	.10	.25
Large Type/Braille	.05	.09	.00	.20
Large Type	.63	.44	.16	.37
Large Type/Inkprint	.15	.02	.07	.02
Inkprint	.05	.00	.56	.02
Auditory	.01	.00	.10	.06
None	.00	.00	.00	.08
1969				
Braille	.08	.35	.06	.09
Large Type/Braille	.04	.11	.01	.08
Large Type	.58	.47	.10	.35
Large Type/Inkprint	.19	.04	.28	.12
Inkprint	.08	.01	.50	.02
Auditory	.03	.02	.06	.34
None	.00	.00	.00	.00

School Systems and Severity of Loss

TABLE 5
Comparisons of Schools for Proportions of Students Having Vision of Object Perception or Better or Light Perception or Worse

Reading Media for Students With Some Residual Vision

TABLE 6
Comparison of Mode of Reading and Type of School System for Students With Vision of Object Perception or Better

	K	1	2	3	4	5	6	7	8	9	10	11	12	Ung.
Total U.S. (1958)	.05	.10	.10	.09	.09	.09	.09	.08	.07	.07	.07	.06	.04	
Blind—1960	.07	.15	.11	.10	.08	.08	.07	.07	.05	.05	.04	.03	.03	.06
Blind—1963	.03	.09	.09	.11	.11	.09	.08	.07	.06	.06	.05	.04	.04	.18
Blind—1966	.03	.07	.07	.07	.08	.08	.09	.09	.08	.07	.05	.05	.04	.12
Blind—1969	.03	.06	.06	.06	.06	.06	.06	.07	.07	.08	.08	.07	.05	.19

TABLE 7
Comparisons of Grade Distributions
of Blind Students and Total
Enrollment in the United States

1966, although the majority of their students still fall in the braille or braille-large type category.

In light of these observations, it is interesting to examine the distribution of students within the commission programs. The majority of these students read regular inkprint-large type. Since Table 5 shows that local schools reported more students with higher degrees of vision than commission or residential systems, it would be expected that local school students would make more frequent use of regular inkprint. No explanation can be found in the data for this discrepancy. Comparison of the residential and multiply handicapped residential systems yields similar results. The frequency of inkprint readers within the systems is the reverse of the pattern of distribution of visual categories. While residential schools have a larger proportion of students in the better visual categories, multiply handicapped residential schools have much larger proportions reading inkprint.

□ Table 7 presents data for comparison of grade distributions of blind students and the total pupil enrollment in the United States. The 1969 distribution substantiates previous evidence that the wave of retrolental fibroplasia has passed. Comparison of percentages shows that over most grades the percentages have decreased relative to the 1958 total pupil enrollment. Inconsistent with this, however, is the 50 percent increase in the ungraded category for the blind.

Grade Distribution for Visually
Handicapped and Normal Students

Overall, the ungraded category continued the pattern of recent years by increasing 50 percent between 1966 and 1969. This represented about a 54 percent average gain by the various systems. Of the multiply handicapped school population, 81 percent are considered ungraded. In the other systems about 22 percent of their enrollment is listed as ungraded. The steady increase in the numbers of ungraded students doubtlessly reflects the growing concern for the education of multiply handicapped students within all school systems. The number of these children is growing as a result of the recent rubella epidemics. However, to an unknown extent, increase in the numbers of ungraded students also reflects the growing numbers of ungraded educational programs at the primary and elementary levels.

□ 1. The total number of legally blind students registered with the American Printing House in January of 1969 was 20,512. This was an increase of 1,505 over the 1966 quota registration.

Summary Table 1966-1969

2. Of this population, 6,722 students were registered in residential schools for the blind, 12,049 were students in local day school programs, 763 were enrolled in state commission programs, and 345 were enrolled in residential schools for the multiply handicapped.

3. The greatest proportionate change occurred in the multiply handicapped residential programs where enrollment increased by 29 percent. Commission programs witnessed an increase of 15 percent while local school enrollments increased by 11 percent. The residential school system was unique in experiencing a two percent loss in student enrollment over that reported in 1966.

4. Of the students, 39 percent used braille in 1969 compared to 46 percent in 1966. The percentage using large type remained static at 36 percent. The percentage of students reported making at least some use of inkprint rose from 11 percent in 1966 to 16 percent in 1969. Auditory readers increased from two to five percent.

5. The general trend continues to be towards increased use of residual vision. Especially within the higher visual levels, the percentage of braille students has decreased while the proportions of students using large type and regular inkprint media have increased. School system biases toward use of certain media regardless of the visual characteristics of the population served still appear. The continued use of braille by students at higher visual levels who are enrolled in residential schools is the most pronounced example.

6. The numbers of students categorized as ungraded are still increasing at a rate of about 50 percent over each three-year reporting period. Twelve percent of the children were assigned to the category in 1966 as compared to 19 percent in 1969.

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5. Nolan, C. Y. "Blind Children: Degree of Vision, Mode of Reading—A 1963 Replication," *New Outlook for the Blind* 59(1965):233-38.
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References

Reinforcement :

One Teacher's Experiences and Experiments With Multiply Handicapped Blind Children

There is, at present, a great deal of discussion about reinforcement, particularly about its use in behavior modification or operant conditioning. The emphasis is generally upon *why* reinforcement is used and *when* it is used. It must be pointed out that long before operant conditioning became a well thought out and tested theory, reinforcement was in use and nearly universally accepted; it is a rare teacher or parent who has not used praise or some more tangible reward for desirable behavior and/or some form of punishment for undesirable behavior. The importance of the reward in operant conditioning is not so much *that* a reward is given for positive behavior, but the *consistency* with which these rewards (reinforcements) are given, and the carefully patterned, increasingly complex developmental steps which, one after another, become the focus of reinforcement as each previous step is mastered.

□ The success of operant conditioning with animals is well known and little disputed. The use of operant conditioning with human beings, however, is under constant criticism. Much of this criticism is probably based upon the idea that operant conditioning is an "inhuman" method of teaching—that it is a method to be used with animals and not with people; that, if it is used with people, it will be destructive to their self-concept by emphasizing their more animalistic desires, or by turning them into automatons.

My own early experiences in using operant conditioning with emotionally disturbed, functionally retarded, and brain-injured blind children have left me with mixed impressions. I am now convinced that it does get results and that it is useful, especially with those who have great difficulty in learning and with those who are not very verbal. There are, however, many difficulties and problems associated with its use. Perhaps the greatest of these is the difficulty in finding an effective reinforcement.

It seems to be generally taken for granted that M & M candy or similar tidbits are the standard reinforcement. For many children, especially those who are emotionally disturbed, however, food is a negative stimulus. For other children, especially those with brain damage, a food reward may complicate the learning task by bringing in an extra, usually unrelated, element. Frequently, in such a situation, the child's emphasis turns so much towards the food, that only the most superficial learning can be accomplished.

□ It can be quite a problem finding a reinforcement which is both meaningful to the child and appropriate to the situation. When and if such a reinforcement is found, operant conditioning can become a truly meaningful and valuable method of teaching. One of my students, who is totally blind and severely emotionally disturbed, provides a good example. This child refused to

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Criticism of Operant Conditioning

Especially useful with those with severe learning problems

Food is not always a good reinforcement

Reinforcement Must Be Meaningful and Appropriate

do anything for herself—even open a door or feed herself—although she was 15 years old. She would go into long and frequent fits of screaming, scratching, and biting, in apparent anguish; because she would not verbalize her feelings, we could only guess at the cause of these fits. She did not like to eat and usually refused most or all of her lunch; thus, a food reinforcement was out. Her blindness eliminated all visual forms of reinforcement, and she rejected every other form of auditory reinforcement that was tried. Finally, it was discovered that she loved to have her back rubbed and this, therefore, proved to be an extremely effective reinforcement.

Although we have not yet reached down to the basis of this child's severe and complex problem, there is no doubt that her behavior has changed significantly during the past year and that these changes are very probably related to the consistent use of backrubbing (accompanied by verbal) reinforcement. Her self-care and general responsiveness are definitely improved: she opens even difficult doors for herself, flushes the toilet after use and returns to the classroom independently after using the toilet; unbuttons her coat; and eats many foods previously refused, generally completes her entire meal, and does much of the work in feeding herself. She also is participating more in classes. She had previously refused to do all of these. More importantly, her fits of screaming anguish occur less frequently and are much less severe than before. Reinforcement was given during these fits whenever she stopped crying, even if only to get her breath. As a result, the periods of non-crying have gradually increased. Her behavior was also reinforced whenever she seemed especially happy or calm.

Although we have in no way solved this child's deep problems, she does now function on a much happier, more verbal, open, and responsive level. This improvement in her behavior greatly simplifies working with her and increases the probability of our eventually "reaching" her.

□ A second example, where success may be directly related to the consistent use of a rather unusual reinforcement, is a blind child who exhibited aphasic behavior (inability both to understand speech and to speak, although both hearing and intelligence are adequate for speech). This child, at nine years of age, was still not completely toilet trained. She understood the purpose of a toilet, but couldn't be bothered with worrying about it until the very last moment, that is, until she only had time for a step or two in the direction of the bathroom before the flood broke loose. Any attempt to have her use the toilet at regular times was met not only with refusal, but with a ferocious kicking-and-screaming tantrum. It was observed, however, that she adored playing with the Venetian blind in the bathroom, and this proved to be an effective reinforcement. The Venetian blind was kept up, prohibiting her from playing with it; each time she used the toilet, it was brought noisily down. After only two or three days of this, she was completely toilet trained. Thereafter, the post-toilet playtime was steadily decreased until she was able to use the toilet without expecting to play with the Venetian blind.

A third example, again with a somewhat unusual reinforcement, is an

Example of gains

Venetian Blind and Aphasic Child

"Miss Clown"

emotionally disturbed, functionally retarded, 15-year-old blind girl. This child was compulsively rude, negative, and destructive. No amount of praise for positive behavior or discussions about the effects of her negative behavior had any success. The child herself then indirectly suggested what turned out to be a very effective reinforcement. On a trip to the circus, she fell in love with the clowns. Shortly after this trip, having performed especially well on a task, she said, "You should call me 'Miss Clown' for that." From then on she was called "Miss Clown" whenever her behavior was constructive, appropriate, or sociable. The effectiveness of this reinforcement was indicated by the immediate and continuing improvement in "Miss Clown's" behavior, both academic and social.

□ These examples, and many other similar experiences, have completely convinced me that the creative use of reinforcement is a teaching tool of immense value in overcoming difficult learning problems. It is possible to lose sight of the child if there is too much emphasis on method; when the reinforcement is carefully planned around the individual child and the individual situation, however, this danger is eliminated. The possibilities for improvement then appear to be limitless.

Conclusions

New Outlook for the Blind Reprints

The New Outlook for the Blind has recently begun a program of offering selected articles from the magazine in reprint form. The articles now available are:

The Blind in the Age of Technology: A Public Discussion.

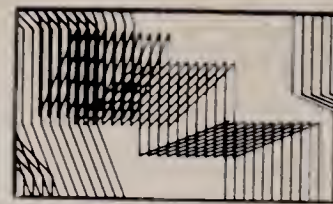
Restoration and Habilitation of Handwriting Skills to Adults in a Rehabilitation Center, by Mary Lou Stark.

Teaching the Concept of the Diagonal During Handwriting Lessons for the Congenitally Blind, by Jane G. Wheeler, O.T.R.

When You Meet a Blind Person, by William Goodman.

As appropriate articles are published in the magazine, they will be added to this reprint series. The prices are: 1-5 copies free; 6-50 copies 15c each; 51-100 copies 10c each. All payments totaling \$6 or less must accompany orders. Order from publications division, American Foundation for the Blind, 15 W. 16th St., New York, N.Y. 10011.

Answers to Accreditation Questions



National Accreditation Council for Agencies Serving the Blind and Visually Handicapped

Q. Can our agency be accredited? Three out of six of our professional staff do not have professional degrees—yet they do what we think is a very good job. How would the standards requiring professional training apply here?

A. The standards are intended to bring about improvement of services to blind people. The purpose is to help blind persons to "function within the framework of general community life, rather than isolating them from it." (See page 4, Section C-1, *Self-Study and Evaluation Guide* published by the National Accreditation Council.) This means that all standards are applied with the framework of this purpose.

Standards on professional training of staff were included because, in general, staff who have had professional training are better equipped to help blind people develop self-reliance and mobility, solve personal problems, broaden their relationships with others, and find new interests. Also, as a rule, professionally trained staff can best impart—or help blind people obtain—general education and job skills.

We know, however, that many dedicated staff members, especially those who entered the field before much of the present professional training was available, have developed insights and techniques of great value. In fact, such insights and techniques are now included in today's professional education. For this reason, the NAC standards include a "grandfather" provision relating to staff professional training.

The grandfather provision does not

mean that an evaluation of your agency will automatically approve all programs and practices. It does give an opportunity for you to ask such questions as: How well is our present staff enabling us to provide for such special needs of blind people as mobility and orientation, methods of communication, self-care, medical services, or visual aids appropriate to their eye conditions? How adequately does staff carry out the policy of assuring that the special needs of blind people are met—regardless of whether those needs are met directly by our agency or not?

If your present staff members are doing a good job in the areas covered by the standards, they are demonstrating professional capacity and performance. The fact that three out of the six do not have professional degrees would not prevent your agency from being accredited in this case.

But—there is one thing more. Your agency, like others, has a continuing responsibility to maintain quality services. What will happen when you must find replacements for your present staff members or additions to your staff?

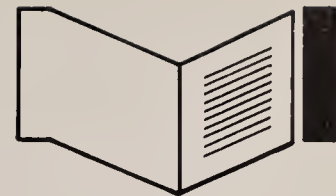
Blind people are entitled to benefit from the skills of fully qualified teachers, doctors, social workers, librarians, vocational counselors, rehabilitation teachers, psychologists, and peripatologists. That is why you are expected to have a personnel manual which will not only include personnel practices, but also job descriptions and qualifications for each job. Good personnel practices help you to attract and hold qualified people. Clearly stated job qualifications

enable you to identify the kind of professional preparation that each job requires and to seek job candidates among those who can meet your qualifications. Thus, the accreditation question is not: "Must all our present staff have professional degrees?" The accreditation process involves a two-part question: "Does our present staff give service of high quality and do we have policies and procedures that will enable us to replace these staff members in time with people who can give service of equal—or, better still, higher—quality?"

Professional degrees don't guarantee such service, but the degrees do indicate that your candidates have completed certain specific preparation for their jobs. That's why you will want to include professional preparation in your future job qualifications.

We have answered this question in more detail than usual because we know it is a matter of concern to many agencies and schools. The standards are not an obstacle course designed to trip you. They are aids to help you do better the job that you want to do—the job of helping blind persons lead fuller, more satisfying lives. Each agency is different and NAC looks at each in the light of the agency's stated goals and the extent to which it is reaching those goals.

What is your question about accreditation? Send it to the National Accreditation Council, Suite 1406, 79 Madison Avenue, New York, New York 10016. If it is of general interest, we will try to answer it in this column, but you will in any case receive a direct, prompt reply.



The Multiply Handicapped Child, compiled and edited by James M. Wolf and Robert M. Anderson. Charles C Thomas, Publisher (301-327 East Lawrence Avenue, Springfield, Illinois 62703), 1969, xvii + 468p. \$21.00. A collection of articles (mostly reprinted from journals) for those who work with exceptional children. The following chapters are of special interest to workers in the field of blindness (dates in parentheses indicate time of original publication): Mary D. Sheridan, "Final Report on a Prospective Study of Children Whose Mothers Had Rubella in Early Pregnancy" (1964), pp. 78-79; Steven Mattis, "An Experimental Approach to Treatment of Visually Impaired Multihandicapped Children." pp. 219-24; Anna S. Elonen and Margaret Polzien, "Experimental Program for Deviant Blind Children" (1967), pp. 225-32; William M. Cruickshank, "The Multiply Handicapped Child and Courageous Action" (1964), pp. 233-46; and Barbara Bateman, "Psychological Evaluation of Blind Children" (1965), pp. 297-303. A list of 1,157 references, together with an index by number under selected headings (e.g. "Visually Handicapped"), enhances the value of the book.

Body Image and the Severely Handicapped Rubella Child, by Virginia Guldager. Perkins Publication No. 27. Perkins School for the Blind (Watertown, Massachusetts 02172), 1970, 61p. \$2.00. The author presents a body image scale for use with pre-school multiply handicapped rubella children.

Reactions to Blindness; An Exploratory Study of Adults With Recent Loss of Sight, by Roy G. Fitzgerald. *Archives of General Psychiatry* (American Medical Association, 535 North Dearborn Street, Chicago, Illinois 60610), Vol. 22, April 1970, pp. 370-79. Study conducted in England of 35 men and 31 women of

working age. Reprints may be requested from the author, an M. D. at the University of Pennsylvania Medical School, Department of Psychiatry, University and Woodland Avenues, Philadelphia, Pennsylvania 19104.

Blindness and the Child's Sequence of Development, by James N. Oliver. *Journal of Health, Physical Education, Recreation* (American Association for Health, Physical Education, and Recreation, 1201 16th Street, N. W., Washington, D. C. 20036), Vol. 41, June 1970, pp. 37-39. Dr. Oliver discusses the effect of visual impairment on the timing of various stages in the physical development of children.

Softball for the Blind Student, by Martha Lynn Bolt. *Journal of Health, Physical Education, Recreation* (see address above), Vol. 41, June 1970, p. 40. The author developed the described softball techniques while teaching physical education classes to blind and sighted students at Wheeling High School in Wheeling, Illinois.

The School's Responsibility for Providing Physical Activities for Blind Students, by Charles Buell. *Journal of Health, Physical Education, Recreation* (see address above), Vol. 41, June 1970, pp. 41-42. Dr. Buell enumerates useful games for blind children as attested by various educators in California schools.

Integration of the Sightless Student Into Regular Physical Activities, by Thomas M. Trevena. *Journal of Health, Physical Education, Recreation* (see address above), Vol. 41, June 1970, pp. 42-43. The author gives examples of procedures that enable the blind student to compete effectively with sighted students.

They're Staying in School Longer and They're Making Better Marks. *Insight*

(North Carolina State Commission for the Blind, 410 North Boylan Avenue, P. O. Box 2658, Raleigh, North Carolina 27602), Vol. 3, No. 3, Summer/Fall 1970, pp. 16-20. The story of "Early Bird," the unofficial, but popular, name for the College Orientation Program for Blind and Visually Handicapped Students in North Carolina, held annually since 1967.

Russian Visit—A Look at Blind Welfare. *St. Dunstan's Review* (191 Old Marylebone Road, London N. W. 1, England), Vol. 56, No. 613, November 1970, pp. 12-15. Report on a visit by three members of St. Dunstan's staff sponsored by the All Russia Society for the Blind.

Profile of Mae E. Davidow, Ed. D., by Walter Evans. *Red and White* (Overbrook School for the Blind, Sixty-fourth and Malvern Avenue, Philadelphia, Pennsylvania 19151), Vol. 61, No. 1, November 1970, pp. 25-27. Short biography of Dr. Davidow, blind teacher and leader chosen by Phi Delta Gamma fraternity as the 1970 recipient of two of its National Achievement awards. Dr. Davidow received both annual awards for women, one for distinguished service in her chosen field and the other for her contribution to the literature in her chosen field.

—M. M. R.

Additional Listings

Nat-Cent News, a quarterly review of the National Center for Deaf-Blind Youths and Adults (105 Fifth Avenue, New Hyde Park, New York 11040). Vol. 1, No. 1, October 1970. Large type, mimeographed, available free to interested persons on request.

Optacon Newsletter, published by Stanford University. Issue No. 1, November 1970. Further information is available from Mrs. Jo Anne Wise, AEL 216, Stanford Electronics Laboratories, Stanford University, Stanford, California 94305.



■ Federal examiners have conducted hearings and recommended that California, Indiana, and Nebraska be found out of compliance with federal welfare laws. In all three states, it was found that cost-of-living adjustments in the legal maximum payments under the Aid to Families with Dependent Children program had not been made, contrary to a 1967 federal law. John D. Twiname, administrator of the U.S. Social and Rehabilitation Service, has final authority in deciding the cases and can withhold federal funds from the three states until they come into compliance. California has recently submitted amendments to its welfare plan which might bring it into compliance.

■ The National Guide Dog Training Centre in Kew, Victoria, Australia, has instituted a program for training six mobility instructors in the use of the binaural ultrasonic spectacles invented by Professor Leslie Kay. This project is a joint effort of four organizations within the Australian National Council for the Blind: the Royal Blind Society of New South Wales, the Royal New South Wales Institute for Deaf and Blind Children, the Royal Victorian Institute for the Blind, and the Royal Guide Dogs for the Blind Associations of Australia.

■ The New Jersey State Commission for the Blind has established a new district office at 1 New York Avenue, Atlantic City. Headed by Cornelius Lambert, a senior vocational rehabilitation counselor, the new office will permit more direct and rapid service to residents of Atlantic City (a recently designated model city), Atlantic County, and the surrounding region.

The Commission has also recently formed a second class for handicapped children, principally pre-school youngsters who have severe manifestations of rubella syndrome, at Glassboro State College. The first class was established at Newark State College in 1969. The teacher at Glassboro is Mrs. Carol Klein, a member of the Commission's Education Department staff.

■ Grace Swift Strong, president-emeritus of the Minneapolis Society for the Blind, died September 28, 1970, at the age of 92. Mrs. Strong was president of the Society from its founding in 1917 to 1949 and a recipient of the Migel Medal of the American Foundation for the Blind in 1955.

■ The National Center for Deaf-Blind Youths and Adults, operated by the Industrial Home for the Blind, Brooklyn, under contract with the U.S. Social and Rehabilitation Service, is now located in temporary quarters in New Hyde Park, New York. The National Center provides rehabilitation services to deaf-blind youths and adults on a nationwide basis. Services for children are provided by the Bureau of Education for the Handicapped, U. S. Office of Education.

Inquiries about the adult program should be addressed to the National Center for Deaf-Blind Youths and Adults, 105 Fifth Avenue, New Hyde Park, New York 11040.

Inquiries about the program for children should be addressed to the Coordinator, Centers and Services for Deaf-Blind Children, Bureau of Education for the Handicapped, U.S. Office of Education, Room 2617, 7th and D Streets, S.W., Washington, D.C. 20202.

■ Telemind, Inc. (Box 549, Wilton, Connecticut 06897), manufacturer of educational equipment, has announced the availability of Polygrid, a set of interlocking balance beams for use in developing the perceptual-motor skills of children. The company also manufactures sound effects equipment and Polysounds, a series of tape recordings for teaching auditory discrimination. Full information is available on request.

Appointments

■ American Public Welfare Association, president (by election): **George K. Wyman**, commissioner, New York State Department of Social Services, Albany.

■ Perkins School for the Blind, Watertown, Massachusetts: **Mrs. Gisela M. Titman**, head librarian.

■ North Carolina Governor's Committee on Employment of the Handicapped: **W. Joseph Strickland**, executive secretary.

■ Arkansas Enterprises for the Blind, Little Rock: **Mrs. Margaret King**, occupational therapist.

■ New Mexico School for the Visually Handicapped, Alamogordo: **Donald H. Edwards**, superintendent.

Awards

■ Bell Greve Award (National Rehabilitation Association) to **Dr. Peter J. Salmon**, administrative vice president, Industrial Home for the Blind, Brooklyn.

■ First Seeing Eye Research Chair (sponsored by Seeing Eye, Inc., Morristown, New Jersey) to **Arnall Patz**, associate professor of ophthalmology, Wilmer Institute, Johns Hopkins Medical School.

Coming Events

March 9-13 National Association of Hearing and Speech Agencies, Annual Conference, San Francisco.

March 11-13 California Transcribers and Educators of the Visually Handicapped, 12th Annual Conference, San Diego, California.

March 15-17 National Health Council, 51st Annual Meeting, San Francisco.

March 17-20 Association for Children With Learning Disabilities, Annual Conference, Chicago.

April 4-8 American Personnel and Guidance Association, Atlantic City, New Jersey.

April 14-16 President's Committee on Employment of the Handicapped, Annual Meeting, Washington, D.C.

April 18-24 Council for Exceptional Children, 49th Annual International Convention, Miami Beach.

April 26-May 1 Association for Research in Vision and Ophthalmology, Annual Meeting, Lido Beach, Florida.

April 29-May 1 United Cerebral Palsy Associations, Annual Conference, Denver.

May 1 National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, Annual Meeting, Fort Lauderdale, Florida.

May 2-6 National Industries for the Blind, Spring Workshop, Fort Lauderdale, Florida.

May 9-12 International Association of Rehabilitation Facilities, Las Vegas.

May 16-21 National Conference on Social Welfare, Annual Meeting, Dallas.

May 17-20 National Braille Association, 11th National Conference, Chicago.

May 24-26 American Ophthalmological Society, Annual Meeting, Hot Springs, Virginia.

June 6-10 Special Libraries Association, San Francisco.

June 20-24 American Medical Association, Annual Convention, Atlantic City, New Jersey.

June 20-26 American Library Association, Annual Convention, Dallas.

June 22-23 American Diabetes Association, 31st Annual Meeting, San Francisco.

June 23-26 American Optometric Association, 74th Annual Congress, Houston.

June 27-July 2 American Physical Therapy Association, Annual Conference, Boston.

June 27-July 2 National Education Association, Annual Convention, Detroit.

July 18-22 American Association of Workers for the Blind, Biennial Meeting, Richmond, Virginia.

July 25-30 International Association of Applied Psychology, 17th International Congress, Liege, Belgium.

August 4-8 Blinded Veterans Association, 26th National Convention, Miami Beach.

October 25-29 American Foundation for the Blind, 50th Anniversary Meetings, New York City.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

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If you are planning to move, please let us know at least six weeks in advance so that we can insure that your *Outlook* will continue to come without interruption. Just fill in the blank to the right and return it to The New Outlook for the Blind, 15 West 16th Street, New York, N.Y. 10011. Make sure that you include your *old* as well as your new address and your zip code. If you have a label from a recent issue of the Outlook, attach that in the space marked "old address."

THE NEW OUTLOOK FOR THE BLIND

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Sensi-Quik's shaft is made of large diameter, tapered tubular fiber-glass with gleaming white pebble finish, and has a bright red band at its tip. The smart-looking contour handle is of black vinyl. The 1/2-inch diameter, diamond-hard, tungsten-carbide working tip resists wear, and produces sharp, useful touch information. The cane is put together with epoxy, as fiber-glass golf clubs are, to withstand repeated sudden impacts.

The Sensi-Quik fiber-glass model comes with either crook or contour handle and either carbide or replacement steel tip. Sensi-Quik is also available in high-strength, nickel-plated, steel shafts recommended for 50- to 60-inch canes when extra strength is desired. The steel shaft adds three to four ounces to the weight of the cane.

Canes are made on individual order in any length from 34 to 60 inches.

Developed and distributed by the Go-Sees, a non-profit corporation, Sensi-Quik canes are not sold. They are supplied to anyone who joins the Go-Sees and pays a membership fee of \$5. They are also available through agencies to individual trainees at a reduced rate of \$4 (they must be ordered in even-inch lengths).

Persons or agencies interested in the Sensi-Quik cane are invited to contact



Along with the Sensi-Quik cane, the Go-Sees provide an instructional manual entitled "Touch and an Occasional Tap." It is available on disk and tape and in braille and ink-print. In addition to stating the philosophy of the Go-Sees, the manual teaches the vocabulary of "cane talk words" that enable the traveler to respond quickly and deftly to the messages his cane picks up from the environment. The manual is available on loan from the address below.

Franklin S. Clark
The Go-Sees
166 East 92nd Street
New York, N.Y. 10028

THE NEW Outlook FOR THE BLIND

April 1971 Volume 65 Number 4

Articles

- 105 Gearing to Meet the Challenge of the Decade
 Warren Bledsoe
- 108 The Role of a National Voluntary Agency
 in Meeting the Challenge of the 1970's
 Harold G. Roberts
- 112 An Abacus Update
 Janice K. Hattendorf, L.L.D.
- 117 Expanded Opportunities for Multiply Handicapped Children
 Lee A. Iverson
 Jack R. Hartong
- 120 Present-Day Concepts and Practices of Rehabilitation Teaching
 Frances Crawford
- 126 Demonstrating the Relationship Between Three-Dimensional
 Figures and Their Two-Dimensional Representations to
 Blind Students of Mathematics
 Frederick T. Neumann
- 129 Teaching Rock and Roll Dancing to Totally Blind Teenagers
 Stanley Briller
 Becky Morrisson

Departments

- 132 Answers to Accreditation Questions
- 133 Current Literature
 Mary Maie Richardson
- 134 News in Brief

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Gearing to Meet the Challenge of the Decade

The field of work for the blind is not, as some people suppose, narrow. The ubiquitous intrusion of blindness into every area of performance of blind people with a variety of temperaments has required multiple solutions to a variety of problems involving all sorts of sciences, knowledge, and skills. In the same day anyone in charge of a program for blind people might well wish he were an engineer, a lawyer, a social worker, a psychologist, an optometrist, an accountant, a statistician, and possibly a detective and a newspaper editor. Problems which seem to require expertise in all these areas are not uncommon. First, last, and always, the talents of a diplomat are required to enlist and draw upon the above-named and many more competencies which the situations of blind people bring into play in the modern world.

A historian of work for the blind, therefore, might well be expected to trace the development of medical care of the eye, the development of finger reading, the development of sound-recording, laws affecting the blind, industry and the blind, the professions and the blind, mechanical aids, eye glasses for those with low-vision, and various other subjects significant in the lives of blind people. Needless to say this is not an easy task.

□ Though blindness is commonly regarded as a physical handicap, up to now the social means to overcome it have far exceeded the mechanical means. In my opinion the key factor in meeting the challenge of the future in work for the blind will continue to be people playing certain roles. Elsewhere I have several times described what I conceive these roles to be: 1) the status figures or cynosures, 2) the hewers and haulers, fetchers and carriers, 3) the inventors, 4) the shining examples, and 5) the stormy petrels or agitators. A few months ago I began to notice another role which is separate and distinct from the others. This role, in my opinion, is that of the counselor of state: any state of the United States, or the whole United States, Lichtenstein, Yugoslavia, or Spain. And I have experimented with writing down what I think is required of such a counselor. It is as follows:

1. As much ease with blind people as with the sighted.
2. Real true familiarity with the things blind people can and cannot do.
3. Diplomacy in managing the embarrassing dictum "blind people can do anything."
4. Total absence of snobbishness toward the practitioner "down in the mud" with blind people.
5. Ability to conjure with the national passion for the mechanical solution to blindness and the reverence for statistics and bigness.

Selections from a keynote address delivered at the Mid-Atlantic Regional Conference of the American Association of Workers for the Blind in New York City on September 23, 1970.

WARREN BLEDSOE

Mr. Bledsoe is chief consultant to the Division of Services to the Blind, U.S. Social and Rehabilitation Service, Washington, D.C.

The Roles Workers Play

The counselor of state

6. Ability to master the barricade of "you will never know what it is to be blind"—either by blindness itself or an intuitive quality which is an adequate substitute.
7. Willingness to keep up with a considerable number of areas, subjects, technicalities with which impaired eyesight involves the human being. This is where the *narrow* subject of blindness becomes very *broad*, e.g., finger reading, optics, statistics, small business, sociology, etc.
8. Whereas all other counselors of state have many other worthy commitments, this counselor should have a judicious, but highly serious commitment to blind people in all *quid pro quos*. (The able, ambitious fellow on his way somewhere has a disappointing tendency to sell out when the chips are down. However, there are exceptions when men on their way make fine contributions and manage their interests without conflict.)
9. Ability to belong to the state of which he is counselor, and to blind people, not to agile folk who are champions at getting to such people like him.
10. Imagination and open-mindedness coupled with an uncanny ability to spot quacks, frauds, and insane people.
11. A strong tendency to feel joy when other people flourish, to regard crises and obstacles as worthy enemies, but outcomes, resolutions, and smooth motion as beloved friends.
12. Ability to keep his head when all about him are losing theirs and blaming it on him.
13. There must be no 13 for him (or her). He (or she) must fear no evil.
14. Whatever his education is, it should have given him some idea of what a state is and how it has evolved.
15. Whatever his upbringing, it should have given him some idea of what a human being is and how it has evolved.

The broad and the narrow

Imagination and open-mindedness

□ This bill of particulars grew out of my observation of people, and one of the individuals I had in mind was Peter Salmon. I sent him a copy telling him so. He modestly protested that the one I had described was Miss Mary Switzer. I disagree. Miss Switzer was the state itself when Peter was advising her. He was one of her first counselors of state on blindness as a member of the National Advisory Counsel on research. Both were rare performers indeed. It is no mean achievement in a federal set-up to identify with the interests of a nation with many states containing every kind of aspiration and every kind of prejudice. As I have worked in the federal government, I have had an increasing respect for presidents, lamas, popes, and princes who manage to love whole nations and families of nations, looking for common denominators like the four freedoms, but who are also aware of minorities and their needs. A fine tradition of rapport has been developed between work for the blind and the leadership of the Rehabilitation Services Administration, a tradition begun by Miss Switzer and Peter Salmon, and one which the present leadership has every intention of maintaining.

Peter Salmon and Mary Switzer

□ Whatever has been going on in other phases of the national life, work for the blind has been in a period of expanded investment during the past three decades. The Social and Rehabilitation Services alone has put \$10 million into research and demonstration since 1954 when the Vocational Rehabilitation Act was revised to include funds for such a program. The administrator and the chiefs of Services to the Blind and Visually Handicapped have had an understanding based on a recognition of the importance of the people at the grass-roots: the fetchers and carriers, hewers and haulers in direct contact with blind people, who actually play the leading roles in work for the blind. It is said that there are only two real ranks in the Roman Catholic Church: bishop and priest. Perhaps work for the blind might reduce itself to two: The counselors of state, described above, and the direct-contact people. I have given my job description of the counselor of state. I would like to do the same for the direct-contact people by presenting a credo, one occasioned by some rather cynical remarks once made in my presence.

CREDO ASCRIBED TO CERTAIN MASTERS OF THE ART OF TEACHING BLIND PEOPLE

I hold the art of teaching blind people how to perform without sight among the highest callings which a human being may answer with his life. If at any time through my own infirmity, or to fill a power vacuum, the day comes when I must become a mere executive, supervisor, or administrator, I will remember that, no matter how it seems to the worldly, the true apex of work for the blind is personal service in direct contact with blind people, and that all organized work for the blind has no other end but this, as fully and well-performed as available knowledge permits.

During the years when it is my privilege to practice the art, I will do my uttermost, not only to extend my own effectiveness and the effectiveness of others, but also to devise ways of imparting efficiency with all the tact and kindness of which I am capable, bearing in mind that the most cherished attribute a person has is his self-esteem, based on a sense of worth, the quintessence of which is independence.

I will keep in mind that a severe handicap, particularly in its early stages or if it goes for a long time untended, requires that an individual be a constant recipient of so much help that the burden recurrently seems intolerable, and that my actions and attitudes should never increase this burden by any kind of ostentation in my bearing toward my work or blind people. Without morbid self-effacement or subservience, I will avoid any form of encroachment upon the individuality of those I serve, especially subtle usurping of credit for their performance.

I will keep my emotions in such order that I will not seek exceptional satisfaction from relationships with those I help, and will steadily perform in such a way as to encourage them to rely on and be preoccupied with those persons it is most natural and desirable for them to know and to love.

To my work hours I will give the most complete attention of the most creative kind of which I am capable, dwelling constantly on every practicality which can render a human being without sight a person of value in his own eyes.

I will guard my tongue and my time, but give generously of my knowledge and experience to others who are also devoted to this art which is my calling.

(Continued on page 116.)

The Role of a National Voluntary Agency in Meeting the Challenge of the 1970's

In contemplating the challenge of the 1970's, there is a temptation to describe the kinds of program development which seemingly need to occur in work for the blind during the next 10 years. If I were to do so, I would want to discuss such matters as the need to develop a comprehensive array of pre-school services including early identification, diagnosis and treatment, and parent counseling; the need to modify curricula and staffing patterns in residential schools in light of the changing population in such facilities; the need to exploit the current potentials for developing vocational education programs; the need to develop and extend comprehensive services for the geriatric blind; and the need to rationalize the research and development process, especially as it relates to technology, so that new aids and devices can be made more readily available. These and other service needs deserve our serious attention during this decade.

□ There is, however, a more basic concern, one which fortunately has begun to receive increasing attention today and about which I would like to add my own views. This concern is with the "state of the art" of this thing we call "the specialized field of service to blind persons."

Retrospectively, I believe, we are all aware that during the past 50 years our field has experienced the excitement of a tremendous growth of new and expanding programs on every front—in education, in rehabilitation, in social welfare, and in technology. There has been a steady stream of special legislation providing new benefits and service to blind persons. New service models, such as rehabilitation centers and low-vision clinics, were developed, great strides toward the goal of professionalization were made, and more and more funds, both governmental and private, were poured into our specialized field. We were even able to codify standards and to pioneer an accreditation system long before others were able to do so.

Today, however, we appear to have reached a new stage in our development, one in which there is a great need for pause, appraisal, and consolidation of gains, a time simply to take stock of where we are and where we need to go. Moreover, one perceives a serious threat to our gains and a steady erosion of our status as a specialized field of service in such trends as the absorption of our state agencies into large, umbrella-type organizations with a resultant loss of independent status and visibility; the effort to broaden the definition of "handicapped persons" to include the socially disadvantaged which threatens to dilute the effectiveness of our current rehabilitation programs; and the "integration" of agencies for the blind with agencies serving

This article is based on a talk given at the Mid-Atlantic Regional Conference of the American Association of Workers for the Blind on September 24, 1970, in New York City.

HAROLD G. ROBERTS

Mr. Roberts is associate director for service, American Foundation for the Blind, New York City.

The State of the Art

A new stage of development

other disability groups, which rather than integrating, simply serves to enlarge the ghetto.

□ What then is "the state of the art" of our specialized field? In approaching this question, I have found it useful to refer to the 1968 study conducted by the Organization for Social and Technical Innovation (OSTI) and sponsored by the former National Institute of Neurological Diseases and Blindness (NINDB). More than anything else, this study, entitled "Blindness and Services to the Blind in the United States,"¹ points up the fragmented nature of our field. In fact, the view is expressed that the "blindness system" is in reality a non-system because of this fragmentation. I concur wholly with this view, but, upon closer examination, it becomes apparent that the so-called "blindness system" is actually an almost random collection of a number of sub-systems each having, in various degrees of development, structured *vertical* relationships but very little in the way of structured *horizontal* relationships with each other. These service systems vary greatly in size, sponsorship, function, and structure. Some of them can be identified as follows: sheltered workshops in affiliation with National Industries for the Blind; the network of regional libraries with national leadership from the Library of Congress; the system of state vocational rehabilitation agencies in partnership with the federal Rehabilitation Service Administration; the local units of Recording for the Blind which produce textbooks in recorded form for college students; and the recently formed National Accreditation Council which is developing a voluntary system of accreditation of all institutions and agencies serving the blind. The essential point here is that no effective mechanism exists, either on the national level or on the local level, to bring these sub-systems together in order to facilitate the orderly planning and coordination of services and the establishment of a rational system of priorities.

Looking at our field in this way contributes, I feel, to a clearer understanding of why an increasing number of us feel a deepening sense of disquiet. It is not that we have run out of steam or that we have lost faith in our motives or our dedication. Rather, it seems that we are reacting to the absence of an overriding sense of purpose, of clearly identified strategies, and of a unified plan of action. If this is true, then remedies must be sought by determining ways to unify our field.

I realize that some may think that I am overstating the case and perhaps this is so. I am aware, of course, that there is a great deal of contact among our institutions and agencies, both nationally and locally, and that our professional membership associations, such as the American Association of Workers for the Blind and the Association for Education of the Visually Handicapped, provide fine and growing opportunities for intellectual exchange at national, regional, and local meetings. I do not believe, however, that this is a substitute for structured mechanisms for the joint planning and systematic coordination of our various delivery systems. To me, the really relevant question is how can we achieve greater unity? The answer, of course, is elusive.

The OSTI Report

Service sub-systems

Sense of purpose is absent

Planning and coordination is needed

□ The OSTI study indicated that the total annual allocation of dollars in the United States related to blindness approaches one-half billion dollars, with the federal government spending roughly twice as much as state governments and five times as much as is spent in the private sector. These funds are spent by approximately 800 agencies on a national, state, and local level, both governmental and private. The last study (1966) conducted by the Bureau of Labor Statistics, under contract with the American Foundation for the Blind, indicated that there are 11,000 of us employed in these agencies.² Undoubtedly this figure is larger today. A report, issued early in 1970, indicates that blindness in the United States is expected to increase by 25 percent during the 1970's. I cite these figures merely to help us gain some idea of the size of our field and the magnitude of the problems we face.

The challenge to unite

This then is the challenge of the current decade: How can our specialized field of service achieve a greater degree of unity? How can we collaborate in the vital task of establishing mutually acceptable goals and priorities? How can we facilitate joint planning and coordination of effort to achieve these objectives? In a word, how can we unite the sub-systems of our non-system into a viable whole?

The Role of AFB

□ How is this challenge to be met through a national voluntary agency? The question has a chastening effect. The American Foundation for the Blind is neither more nor less than a creature of our specialized field. From the outset it was intended that it be a national resource for all who are concerned with the problems deriving from blindness—and it continues today to play this role. All of our activities, from the manufacture of talking books to the publishing of professional literature, from promoting research to providing consultation, from such special projects as constructing a harmonic speech compressor to codifying standards and devising an accreditation system, are illustrations of our role as a private national resource. It is important to recognize that unlike other national organizations in our field, both governmental and voluntary, we do *not* direct a service system. As you know, we have neither local affiliates nor an individual membership base except pro forma. While a number of distinct advantages accrue from this position of independence, there are also disadvantages and these are illuminated when one examines our field from a systems approach. In one sense, AFB is above or, perhaps more accurately, outside of the "blindness system." In any event, it is free standing. Since this is true, it becomes patently clear that in order to contribute effectively to the general objective of promoting improved services for blind persons, the AFB must establish bridges or partnerships with the major distributors of service. In fact, this is our only means of assuring the relevancy of what we do.

AFB's spin-off policy

It has always seemed to me that the potential of the Foundation as a national private organization has never been fully tapped. In a very real way, in fact, we have contributed to the fragmentation of our field by virtue of our traditional spin-off policy. I am referring to the fact that AFB, either through research, program innovation, legislative activities, or financial support, has

brought into being several of the existing sub-systems, such as those relating to libraries, sheltered workshops, recorded texts for college students, and, most recently, accreditation. An additional consequence of this policy should at least be confidence in the fact that the Foundation is not interested in empire building. I always believed that this was a sound philosophy until I learned from George Werntz that during the 'twenties AFB was offered the opportunity to develop the Seeing Eye program and turned it down. How foolish can one be! More seriously, however, this undoubtedly was a wise decision and consistent with the Foundation's main objectives.

I am not at all suggesting that it would have been better had we in the United States followed the British and Canadian examples of almost total centralization of control of specialized services for blind persons. On the contrary, I strongly favor our own pluralistic approach. At this point in time, however, we must begin to reckon seriously with the resultant disadvantages of such wide diversification and fragmentation of our services. Perhaps, in the light of present-day realities and the growing threats to our field, we can no longer afford the luxury of unplanned growth. Moreover, I believe something more is needed than the occasional coming together of national bodies on an ad hoc basis to search for common areas of agreement. It seems to me that we need to invent new ways, new mechanisms to weld our various sub-systems into a unified whole both nationally and locally. Only by this can we hope to arrive at meaningful common goals and unified plans for reaching them. Only in this way can we insure that we all will be marching in step during the decade of the 'seventies and beyond.

□ I, of course, am not prepared to say how this is to be done. I can, however, assure you that AFB stands ready to use its resources in collaboration with all other responsible groups in the task of finding effective solutions to the problems of the 'seventies.

Central control vs. the pluralistic approach

Seeking Solutions

1. The OSTI Report, as this document is often called, is at this writing unpublished. "The Blindness System," an article by Donald A. Schon (*Public Interest* 18[Winter 1970]:25-38; reprinted in *New Outlook for the Blind* 64 [1970]:169-80), however, summarizes many of the findings of the OSTI study.
2. U.S. Bureau of Labor Statistics. *Salaries for Selected Occupations in Services for the Blind, January 1966*. Bulletin no. 1500. Washington, D.C.: The Bureau, 1966.

References

An Abacus Update

For thousands of years, man has used the abacus as a counting and calculating device. For the last 400 years, it has been used in Japan; and for the last 85 years, very effectively by blind Japanese children. No one knows with certainty when or where the abacus was invented. Best scholarship indicates that it was used in Mesopotamia 50 or 60 centuries ago and that it was introduced into the Orient through trade with the Roman Empire.

□ As early as 1920, the proceedings of the American Association of Instructors of the Blind contained proposals that the abacus might serve as a calculating aid to the blind in the United States. In the early 1960's, T. V. Cranmer, director of the Division of Services for the Blind, Kentucky Department of Education, made an abacus for the blind which could be read by touch. In 1962, Fred L. Gissoni, also with the Kentucky Rehabilitation Department, authored the first instruction manual on its use, *Using the Cranmer Abacus for the Blind*. It was not until September of 1963, however, that the American Printing House for the Blind, after considerable research, began large-scale distribution of the Cranmer abacus.

Since its introduction in the education of the blind in the Western world, the Cranmer abacus has met with almost instant success. Wherever blind people who have need for calculation have taken the trouble to learn its operation, it has gained wholehearted acceptance. Those who have struggled with pegboard-type computing devices or with braille equipment find the abacus far superior. Calculation is much faster on the abacus. Pegs or cubes do not have to be manipulated. Paper does not have to be turned over to read one's work. Backspacing and line shifting, as is necessary when calculating with a braillewriter, are eliminated. If the abacus is dropped, the result of the calculation is not disturbed.

Teachers of arithmetic find that their subject, formerly despised by most blind people, is one to which children now eagerly look forward. When groups of blind children or sighted teachers of the blind are learning the abacus at the same time, study is pursued with great zeal. The abacus is regarded almost as a game or fun puzzle. Students are reluctant to put the abacus down, just as the reader of an exciting novel hates to go to bed before finishing the book. Where the abacus has been used by classes of blind children, their performance on standard achievement tests in arithmetic shows considerable improvement.

The Tennessee School for the Blind has undertaken an ambitious program of abacus instruction. As part of this program, contests have been held intramurally, and the winners of these contests have been pitted against sighted students from nearby schools. The blind students using the abacus almost in-

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Introduction of Abacus to Blind Persons in the United States

Immediate acceptance

Interest in arithmetic increased

Contests at the Tennessee School

variably outperform the sighted students using pencil and paper. Not many years ago, the thought of a blind student winning an arithmetic contest would have seemed out of the question. (Ed. note: The experiences of the Tennessee School for the Blind are fully described in the article "The Use of Abacus Contests to Increase Interest in Mathematics" by Marian Lewis and Gary Coker, which appeared in the February 1971 issue of the *New Outlook*, pp. 41-48.)

□ Instead of becoming a crutch without which people are unable to function, the abacus has sharpened the ability of many people to do mental calculations. This is because it is possible to picture an abacus and do surprisingly complicated calculations on the imaginary device. This ability is not limited to the sighted. Several blind people of the author's acquaintance are able to do the multiplication of two digits by two digits with extreme rapidity simply by picturing the work as being done on an imaginary abacus.

The popularity of the abacus is not limited to the United States. The Cranmer abacus has found its way into the catalog of the Royal National Institute for the Blind in Great Britain. Since 1964, the Hadley School for the Blind (700 Elm Street, Winnetka, Illinois 60093) has offered a course in abacus instruction to blind people throughout the world. As with all Hadley courses, the abacus instruction is offered to blind students without charge and is available in braille and in tape-recorded forms. The braille course is in literary braille; no special mathematics code is used. This course, one of the most popular offered by the Hadley School, is short and can be completed in a few months by a diligent student. Learning to use the abacus is not difficult; it just takes a little concentration at the beginning and then a lot of practice. The theory of abacus calculation is based upon logical rules of procedure, so no special mathematical skill is required.

The teaching by correspondence of a course such as abacus calculation involves more than simply presenting a number of problems to be solved on the abacus. All of the questions in Hadley's 15-lesson course are of the multiple-choice variety. Five possible answers are given for each question, only one of which is correct. A series of questions may begin with a specific problem to be calculated. In subsequent questions, the specific steps used in the process of solving the problem are reviewed. The student is asked to set up his abacus in a given way and then to state, by indicating his choice of answers, what procedure must be followed in order to take the next successful step toward the solution.

□ The Hadley abacus course has attracted students of all ages, nationalities, and walks of life. Blind people from all over the United States, from England, Ireland, Germany, Australia, the Philippines, South Africa, Columbia, Bermuda, and Canada have taken the course. Many of these students have found the abacus to be vocationally useful. Attorneys report the abacus to be extremely useful in doing title work and in computing interest and taxes due under certain transactions as of specified dates. Vending stand operators find it very helpful for calculating gross sales and percentage of profit and for preparing tax data and reports to be submitted to various state business-enterprise programs for the blind. Blind persons employed by the Internal Revenue

Aid to Mental Calculation

The Hadley School course

Interest Spreading Around the World

Service to assist taxpayers receive instruction in abacus calculation as part of their basic training. Rehabilitation counselors and educators have taken Hadley's abacus course in order to be able to share their knowledge with their clients or students. Blind chemists and engineers find the abacus extremely useful in doing calculations associated with their work. Even though many of these scientists have access to sophisticated computers, they enjoy the convenience of the abacus and find it a handy guide while thinking through a particular problem. Many housewives rely on the abacus when balancing their household budgets. Many teenagers learn how to operate the abacus in preparation for college. Many others learn to use the device simply because they enjoy playing with numbers.

Three compelling reasons for the popularity of the abacus are speed, freedom from mental effort, and portability.

□ The Cranmer abacus is a *soroban*-type abacus. Soroban, as the abacus is called in Japan, means "number stand" or "counting stand." Every soroban abacus consists of an oblong frame upon which are mounted a number of rods or columns, each containing five beads. The abacus as used by sighted operators contains angular beads which travel freely upon their rods and, therefore, can be moved by the slightest touch of a finger. The travel distance is extremely short, making it possible for sighted operators to attain incredible speed. Sighted abacus operators can usually outperform operators of electric calculators in the addition and subtraction of virtually any number of digits and multiplication and division if the problem contains ten digits or less.

Speed of the Abacus

Because of the free movement of beads, the abacus used by sighted operators is of no value to the blind. The Cranmer abacus has round beads and a piece of foam rubber covered by felt behind the rods to act as a brake on bead movement. Thus adapted, the beads cannot be disturbed by the fingers of the operator when reading his results. Sighted teachers of blind students enjoy the convenience of being able to dictate a problem and simply having each student hold up his abacus to indicate his answer. By standing in one place, the teacher is able to examine the work of the entire class.

The Cranmer abacus

The blind operator of an abacus cannot be as fast as a sighted operator, because he must use his hands for both input and output, as well as for orientation to the abacus itself. Still, the speed attainable by a blind operator, as opposed to the rate at which he would be forced to work using other devices, makes the abacus extremely attractive.

Abacus operation is completely automatic and effortless. Once the pattern of bead manipulation is understood, operation is mechanical and even the most complicated of calculations is reduced to simplicity. To a person who does not know how to use the abacus, these statements are difficult to understand; but to a skilled abacus operator, they are quite obvious. (Ed. note: Details of the operations of the abacus were presented in the article "A Tactile-Developmental Technique for Abacus Instruction and Operation" by Frederic T. Neumann, which appeared in the June 1970 issue of the *New Outlook*, pp. 161-66).

Ease of operation

The Cranmer abacus is pocket-size. It contains 13 columns, measures overall six and one-eighth inches by three and one-fourth inches, and weighs

Portability

three ounces. It is small enough to fit into a pocket or purse. Generally 13 columns are enough for most calculating needs; however, if additional space is required, two or more abacuses may be placed end to end. In addition to the Cranmer abacus (manufactured by the American Printing House for the Blind), Delmar Meyer (1645 South St. Francis, Wichita, Kansas 67211) manufactures 13- and 23-column abacuses containing larger beads. Some teachers report this abacus to be especially useful for individuals having coordination problems.

By using the abacus, it is possible to add, subtract, multiply, and divide; to calculate decimals; to apply the four basic processes of arithmetic to simple, complex, and mixed fractions; to extract roots; and, most effectively, to calculate quantities in different number groupings: such as yards, feet, inches; pounds, shillings, pence; hours, minutes, seconds; degrees, minutes, seconds; etc.

Not only is the abacus useful as a computing device, it also serves as a quick means for storing numbers. For example, a telephone number may be quickly entered on the abacus and later transferred to a permanent record. Some knitters use the abacus to keep count of the number of rows that they have completed.

□ Some teachers of blind children find the abacus very useful in teaching number concepts. As previously mentioned, every soroban-type abacus contains five beads or counters on each rod. Four of these beads, each with a value of one, are grouped together and separated by a horizontal bar from the fifth, which has a value of five. Beads take on their value when moved toward the bar and lose value when moved away, so that the digits from zero through nine can be represented on a single rod. This means that every soroban abacus is a base ten device. However, it may be regarded as three abacuses in one. Taken as a whole, the instrument works to the number base ten, the decimal system so important to all of us. If we divide the abacus, the section with four beads on each column becomes a base five abacus and the section with a single bead on each is a base two abacus. We have, therefore, a valuable tool for teaching base ten, quinary, and binary arithmetic.

At the Overbrook School for the Blind in Philadelphia, where Mae E. Davidow, author of the *Abacus Made Easy*, is in charge of the Mathematics Department, the abacus is introduced to children in the second grade and is used to teach the basic concepts of arithmetic; however, actual computation is not begun until the children fully understand the number concept, the concept of five, and the fact that five ones are embodied in a single counter. It is estimated that 20 residential schools for the blind in the United States teach the use of the abacus as a basic skill, with training beginning in the fourth or fifth grade.

Several residential centers for the adult blind also offer abacus calculation as part of their training for clients. Among the pioneers in this area are the Southwest Adjustment Center for the Blind, Little Rock, Arkansas; the Kansas Rehabilitation Center for the Blind, Topeka; and the Rehabilitation Center for the Blind operated by the Minneapolis Society for the Blind.

Since the arrival of the abacus on the American scene in 1963, several in-

Useful in Teaching Number Concepts

Abacus study begun in primary grades

Institutes and workshops

stitutes and workshops have been held to make instruction in the use of the abacus available to blind people and to teachers of the blind. The University of Kentucky, in Lexington, held the first abacus institute in July 1964. Since then, other abacus courses have been offered by Brigham Young University, George Peabody College, and Michigan State University. Many residential schools and other facilities for the education of blind children and adults have conducted local courses. The latest of these were during the summer of 1969 when the Kansas School for the Blind and the Texas School for the Blind held abacus workshops.

□ In the opinion of this author, the abacus is as important a basic skill to blind persons as is braille. The abacus is to the blind person who has an interest in arithmetic as braille is to the blind person who regards himself as literate. It is important to the future education of the blind that the abacus become a regular part of the curriculum for the training of rehabilitation counselors and teachers of the blind and that local groups continue to offer workshops.

Conclusions

Gearing to Meet the Challenge of the Decade—Continued from page 107.

I will reserve my scorn for those who aspire to be my colleagues without true respect for the calling, who are cynical toward all these things in which I believe, and without diligence and care in performing their duties. These I will relentlessly hurry out of the field by open and above-board structures and sanctions without any regard for influence which such persons may muster to counter-attack.

I will not spoil blind people or encourage them to become mere charming enslavers of those around them. I will look to the long view in helping them, not to the ease of the moment. But I will stop short of making myself a compulsive taskmaster over the people whom I serve.

No matter how my battles go, once a conflict is resolved, I will put it behind me and rest and recondition my heart, mind, and body for further action in the long, creative endeavor which will govern all the days of my life.

□ I have been asked if I have ever known such people. I have indeed—many of them—from the kindergarten teacher who worked at the Maryland School for the Blind in the 1920's to people in work for the blind today.

There Are Many Such People

Expanded Opportunities for Multiply Handicapped Children

Despite the many great strides being made in education, there remains an immense gap between the need and the availability of facilities and programs for the child with a multiplicity of problems. There is little hope that children who are born blind and severely brain-damaged, for example, will ever attend regular schools. Nor can they, due to the severity of their conditions, usually fit into the classes for handicapped children with less imposing problems. The permanent placement in a custodial institution is a difficult decision for parents and is compounded by a severe shortage of such facilities for youngsters throughout the 50 states.

□ In Illinois, however, there is a "last resort" for some of these less fortunate children. It is the Special Services Department of the Illinois Braille and Sight Saving School in Jacksonville. The Special Services program, which is funded in part under Public Law 89-313, an amendment to Title I of the Elementary and Secondary Education Act, was conceived as and still is an experimental program attempting to devise means by which multiply handicapped children may receive help in such areas as daily living skills, sensory stimulation, and academic learning.

This department of the school was originally established as the Deaf-Blind Unit in 1957. Housed with the regular student body in the dormitories, the students were provided with educational programs modified to fit their special needs. As the years passed, however, an increasing number of visually impaired children with additional handicaps for whom no educational facilities were available came to the attention of the school. The deprivation which many of these children had suffered during infancy and early childhood made it even more difficult for them to benefit from the then existing programs for blind and partially sighted children.

Since 1965, these multiply handicapped children have been served through the Special Services Department of the Illinois School. The department is a self-contained unit with a capacity for approximately 25 students, ranging in age from 4 1/2 to 14 years. The dormitory includes bedrooms, a dining room, kitchen, play room, and physical therapy room. Meals are prepared in the school's main kitchen and brought to the cottage in heated food carts. The children use the swimming pool and gymnasium facilities which serve all of the students. A few yards from the dormitory is the classroom building, with an outdoor play area in between the two structures.

The department staff, under the direction of a supervising teacher, consists of the dormitory supervisor, 12 cottage parents, a housekeeper, a dietary worker, and a registered nurse. The academic program is carried out by six teachers. Ancillary services are provided by social services personnel, psy-

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Special Services Department, IBSSS

Originally the Deaf-Blind Unit

Facilities

Staff

chological consultant, speech therapist, physician, dentist, ophthalmologist, mobility instructor, and nursing staff.

□ The youngsters enrolled in the department often begin at an extremely low level in all phases of development. Besides visual handicaps, some have hearing impairments, others have motor problems, and almost all are functioning at a retarded level. For many, the greatest disability is due to emotional problems resulting from educational and environmental deprivation.

The first task of the staff is to reach the youngster—to pull him out of his emotional shell, to stimulate his interest, to activate his physical body, and to release his potential for learning. Only then can any attempt be made toward structured academic learning. Ideally, the goal is placement of the child in the regular program of the school. Realistically, however, the ultimate goal for many of these children may be the development of independence and self-care so they can function with less care in their home environment.

The total development of each child occupies the combined talents and time of the entire department staff. Since self-care and independence is cultivated in both the classroom and cottage settings, the program is in actual operation from seven in the morning, when the children are awakened, until they go to bed at night. Thus, the cottage parents play a vital role in the total program for each child.

Because of their impaired sensory abilities, coupled with neurological and physical handicaps, the majority of these youngsters must be taught to do such everyday tasks as taking a shower, brushing their teeth, and dressing and feeding themselves. Patiently, but firmly, the children are guided through these and related routines until they can attain some measure of independence. It may be a year or longer before a child is able to walk to the bathroom alone and assist with his own bathing. Or, it may be many months until he is capable of feeding himself all foods with a spoon or fork.

For many of the children in the Special Services Department, such activities as running, riding tricycles, playing pitch and catch, and stacking blocks are not part of their previous experiences. Therefore, a big part of each day is devoted to these play activities on an individual and group basis, with the cottage parents encouraging and guiding the students.

□ Academically, each child is programmed individually with no special emphasis being given to grade placement. The child works at his own level and progresses at his own rate. The supervising teacher discusses the needs of each child with the other members of the staff to work out short-term plans for development and achievement. After deciding what each child needs, the individual teacher sets up the structured program and uses the methods and materials he feels are best suited to the situation.

As in other areas of development, the academic program utilizes visual, tactile, and auditory materials. The diagnostic approach in the classroom is further reinforced by the average teaching ratio of one teacher for each three or four students, with a teacher aide assisting. The classroom program may range from basic stimulation and manual and tactile training to higher levels of reading, writing, and arithmetic.

Beginning Level Is Extremely Low

Goals

Progress is slow

The Academic Program

Language development is often one of the greatest roadblocks to formal academic work. Some of the students arrive at the school unable to speak any coherent words at all. After a year of intensive programming, they may be able to speak only 15 or 20 words, and form only one or two short sentences. Their level of word and sentence comprehension may also be on a low scale. The methods of communication, in addition to speech, that are employed with the youngsters can include print, braille, cursive writing, and finger spelling for the blind-deaf.

Language development

□ The minimum and maximum ages for admission to the Special Services Department are 4 1/2 and 8 1/2 years of age. In the majority of cases, the children are six or seven years old when they enroll. It is extremely difficult to assess or predict the educability of these students, thus all enrollments are made on a trial basis and continue for as long as the student progresses.

Evaluation and Admission

An evaluation period, which precedes formal enrollment, may vary from one day to several weeks. During this time, the intellectual functioning, mobility, language, manual dexterity, and tactile, auditory, and visual perception of each child is observed. Levels of self-help skills, behavior and attitude, and readiness for academic work are also closely observed. The evaluation team consists of the cottage parent supervisor, cottage parents, teachers, psychologist, social service personnel, and the registered nurse. If, in the opinion of the staff, the child can benefit from the department's program, he is admitted to the school.

Pre-enrollment evaluation periods allow the staff and the parents to observe the child's level of functioning and to share information and ideas. Realizing that rearing a severely multiply handicapped child is no easy task, the staff helps the parents to understand the aims for each child and what can be done cooperatively, during the school year and during the various vacation periods, to reach the desired goals.

Parental cooperation

In order to remain in the department, the child must make consistent and continued progress as evidenced by periodic review conducted on an individualized basis. Readjustments in the child's program and handling and decisions concerning his enrollment in the department are made on the basis of information gathered during weekly staff conferences.

The staff members are aware that, despite all efforts and years of training, some of the students will not make adequate progress in all levels of development. While some eventually reach the point where they can succeed in the regular classroom programs of the school, others attain the limit of their learning at a much lower level of functioning. When, based upon all the reviews and observations, the supervisor judges that a child in this second category has reached the limit of his potential and is no longer making satisfactory progress, it is recommended that enrollment be terminated. If he is to return to his own home, the parents are given as much assistance as possible in maintaining his highest level of functioning. If custodial care is chosen, aid is also given to find the most satisfactory arrangement.

Terminating enrollment

(Continued on page 125.)

Present-Day Concepts and Practices of Rehabilitation Teaching

This is a discussion of some of the major concepts of rehabilitation teaching which have contributed significantly to our present philosophy and have greatly influenced professional practice during recent years. It will be recognized that these concepts, for the most part, are not new, but are borrowed from related professions and have been merged into a single competency that we now call rehabilitation teaching. The basic concept of providing instructional service to adults who are visually handicapped, however, was developed by home teachers themselves through their demonstration of the value of the service and through their experimentation with various skills and techniques. Such activity has also served as a basis for the trend toward specialization in this field.

□ The recent trend in rehabilitation teaching to enhance the status of the profession and to give increased recognition to its service has been brought about through a clarification of role, definition of function, and upgrading of qualifications for teachers in the field. Long after the service was initiated late in the 19th century, the home teacher, as he was then called, concentrated upon braille, handicrafts, and other pastime activities, activities which were traditionally taught to persons who were blind. The functions of the teacher were diverse in that he was expected to assume whatever role seemed necessary in a given setting in order to fulfill his responsibilities to clients. To become such a jack-of-all-trades, little training was required other than some education, preferably in a school for the blind. The qualification most often specified was that the home teacher be blind and, thereby, able to offer greater insight into the problems and needs of others who were blind. With vestiges of such practices still in existence at the time of the Cosgrove Report, published in 1961, it was with real justification that teachers considered themselves professionally disadvantaged among related disciplines.

While home teaching struggled for professional identity within the agency setting, many teachers who had been trained in other professions transferred the concepts they had learned there to the discipline of home teaching and began to provide service with a more practical approach. During the early years, individual teachers, showing an amazing degree of insight, expressed the view that clients should be taught to do chores around the house and to resume normal and useful activities after experiencing a loss of sight. Over a period of time, it became evident that a growing number of teachers were applying this concept in the provision of service and were

This paper is based on one originally presented at a meeting of district managers of the Bureau of the Visually and Physically Handicapped, Pennsylvania Department of Public Welfare held in September 1967.

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Rehabilitation Teaching—Past and Present

Early philosophy

only waiting for the proper leadership in order to develop those practices into a body of knowledge and thus to speak with authority for the profession. This leadership came about as a result of the initiation of the graduate training program in rehabilitation teaching at Western Michigan University.

What is the frame of reference within which we, as rehabilitation teachers, work today? Our purpose is to teach those skills which will enable the individual to live as fully as possible without sight in his environmental setting; therefore, our over-all objective may be defined as *teaching for living*. It is within this teaching-for-living frame of reference that we consider each individual client's needs and plan an instructional program which is best suited to meet those needs. This mode of operation makes the services we offer unique and justifies our very existence as a profession.

Teaching for living

In practice, then, teaching for living means that we focus upon the individual rather than upon subject matter. We give due consideration not only to the individual's particular interests, needs, and abilities, but also to his role in the family and the community, always keeping in mind the social and emotional problems which exist because of the effects of blindness.

□ Providing instruction within the teaching-for-living frame of reference means that we spend time on those skills which the client needs and really wants to learn. Consider the teacher who encourages the client to complete the course in braille but who neglects to make this skill relevant to the many facets of daily living, as contrasted with the teacher who understands the client's present needs from the client's point of view (as well as from the teacher's) and plans lessons around objectives based on specific needs. For example, the kinds of objectives which would be most meaningful to the newly blinded homemaker in carrying out her routine of daily activities may include labeling of canned goods, making a grocery list, keeping household records, and reading recipes. Learning a skill becomes meaningful to the client when the learning experience is relevant to his needs.

Client-centered Instruction

When planning individualized instruction, we must remember that *why* we teach becomes as important as *what* we teach. The practical use of skills in daily living is emphasized and the teaching made purposeful by keeping these objectives in mind in the planning of each activity.

Furthermore, the teaching service we provide to clients of any age is a *rehabilitation service*, which, taken literally, means *making skillful again*. Our ultimate objective is to enable clients without sight to learn those techniques which will help them become rehabilitated, to become skillful again in performing their daily activities. Recognizing the fact that teaching plays such an important part in the rehabilitation of the individual, it is altogether appropriate that the profession has adopted recently the new name *rehabilitation teaching*.

Teaching and rehabilitation

□ The primary role of the rehabilitation teacher, without question, is that of teaching those skills which contribute to the rehabilitation of the individual client. The emphasis placed upon the role of teaching identifies the discipline as basically educational; however, the service we offer is much more comprehensive than the traditional type of teaching. Clients who have

Education Plus

experienced a loss of sight have emotional problems resulting from the traumatic effects of blindness which may or may not have been resolved by the time instruction begins. If learning is to become effective, existing problems must be recognized and dealt with as the instruction proceeds. The teacher draws upon the skills of the helping professions, such as social work, in order to gain a better understanding of individual clients and those of their problems that are related to blindness or the diminution of vision. It is the use of the techniques of the helping professions, rather than the infringement upon their responsibilities, which makes the role of the rehabilitation teacher unique. This role differs from that of the worker who functions first as a teacher, then as a caseworker or counselor to suit the occasion. Some illustrations will help to clarify the role of the teacher who functions with this concept in mind.

We know that the client invariably experiences a loss of self-esteem because of the psychological impact of blindness upon him. How an individual thinks and feels about himself and, therefore, how he behaves is determined by his self-concept. This perception of himself is based not only upon his previous experiences, but also upon an accumulation of experiences as a blind person which have further enhanced or threatened his self-concept. Others constantly influence how the client perceives himself, including family, friends, and the rehabilitation teacher. The principle involved here is that if others, including the teacher, accept the client and his blindness, he tends to accept himself, and acceptance is essential for effective living. Therefore, the teacher, as he teaches techniques and skills, must plan through the use of his own personality to treat the client with warmth, understanding, support, and acceptance in order to enhance the client's feelings of self-respect and self-esteem.

Self-concept

□ Along with the building of a positive self-concept, rehabilitation teaching also enhances the development of the individual's sense of adequacy. The feelings of helplessness and dependency which so often accompany blindness can be resolved only as clients learn new ways of coping with the frustrations of daily living. Consequently, in the teaching of skills, it is the responsibility of the teacher to plan the kinds of experiences which will promote feelings of success and satisfaction and which will minimize failures and mistakes. As clients feel more positive about themselves and begin to succeed, they function more adequately and show greater willingness to take the initiative in resolving their own problems.

Enhancing the Sense of Adequacy

Another illustration involves democratic principles which are common both to education and the helping professions and which set the feeling tone for learning. The climate for learning is created as a result of interaction between teacher and client. Since the rehabilitation teacher works individually with most of his clients, he must be acutely aware of relationships. An atmosphere conducive to learning is one of acceptance in which the client is challenged to explore possible avenues for solving his own problems without fear or threat.

Climate for learning

If we practice democratic principles in teaching, we will treat each client

with integrity and dignity and will respect his needs and wishes by allowing him the freedom to express his ideas and opinions frankly and openly. We will provide him with opportunities to gain a sense of personal worth through making his own contributions, and even mistakes, in an atmosphere which is challenging and yet free from threat. As a result, the teacher acts as an agent in creating conditions which cause the client not only to see his need for becoming more self-dependent, but also to take positive steps in the direction of rehabilitation.

□ Our unique contribution to the teaching profession is the specialized nature of our teaching. With more highly trained personnel in all of the professions, the trend toward specialization continues, and so it has with rehabilitation teaching. Along with specialization comes the designation of responsibilities, with the teacher concentrating upon those skills for which he is trained and other team members, such as the social worker and counselor, assuming those responsibilities which are theirs. The rehabilitation teacher is a specialist in one area, that is, "how to do it, as a blind person." No other profession offers this particular specialty. While teachers must be able to teach a variety of skills, they are not expected to become experts in homemaking, typing, or all of the other areas that are taught. Other community resources are used for the advanced skills which are beyond those necessitated by blindness. The basic requirement for teachers is that they become effective in the area of their speciality through thorough preparation and training.

During recent years, rehabilitation teaching has begun to consider more carefully the methods used in the teaching of adults. Only within the last few decades has adult education been identified as a separate educational discipline in its own right and rehabilitation teaching as the teaching of adults. Methods for teaching adults differ from methods for teaching children because adults are different. What are the major differences?

First, adult clients, on the whole, are more heterogeneous in that they vary in background, education, experience, need, and the type of service they request. So when adults are taught, the rehabilitation teacher must allow for greater flexibility in planning to accommodate a wide range of individual differences.

Secondly, adults tend to be more structured and rigid in their behavior than children; they approach each learning situation with a set of expectations based upon previous experiences which they use to check what they hear and see. These expectations add to the complexity of adult teaching because they involve already established habits and patterns for doing things which are resistant to change. This structured behavior on the part of adults accounts for much of the difficulty that teachers experience in motivating clients who have already established a pattern of dependency as the result of long-term blindness.

Adults are also more mature; they are accustomed to making their own decisions and planning their own courses of action. When encouraged to do so, adults are usually able to define their own goals and to evaluate with rea-

Specialization and Rehabilitation Teaching

Teaching adults

Heterogeneity

Maturity

sonable accuracy the benefit gained from an instructional program. In working with mature adults, the teacher's responsibility is to help clients discover alternatives and make choices which are in their best interests and which contribute to their rehabilitative objectives.

Adults have many resources within themselves which can play an important part in their rehabilitation if they are motivated to use them. How they are taught makes a tremendous difference in how they respond. Methods of teaching adults are designed to help learners make maximum use of their resources, and, consequently, to make learning experiences personally meaningful and satisfying. To achieve optimum results, rehabilitation teachers must become adept in applying the principles of adult education to the teaching of individual clients. Let us consider some of the principles which are especially appropriate for use in the rehabilitation teaching setting.

□ The first may be called the principle of involvement. It is essential for the learner to understand that the skills being taught are significant to him personally. In keeping with democratic principles, he will have shared previously in the planning of the learning activities. The client learns best by doing and has not really learned at all until he puts into practice the skills he is taught. Therefore, participation on the part of the client, both in the *thinking* and *doing* process of learning, means that he is actively involved in the learning situation and that the experience is personally meaningful to him.

The second principle of effective teaching, particularly for adults, may be termed the principle of problem-solving. If it relates to daily living activities, problem-solving is a common learning device familiar to all of us. The use of problem-solving methods in teaching means that the client is encouraged by the teacher to explore his own needs for instruction, to think through his problems in daily living activities, and to discover as nearly as possible his own solutions. The teacher then becomes a guide who thinks and plans *with* the client, rather than *for* him, and offers assistance as needed. As a result, our teaching becomes a helping, as well as a telling, process in which we emphasize the principle of exploring and discovering and shift the primary responsibility for learning to the client himself.

It must be remembered that the client is likely to learn best and use most those techniques that he discovers for himself. The pragmatic test of a good technique, of course, is that it works well for the client. If the learning situation allows the client enough freedom to discover techniques for himself, then he has a vested interest in learning and is much more inclined to put the techniques into practice.

□ The third principle is teaching by concept. In applying this principle, the rehabilitation teacher organizes techniques into a body of knowledge, using a conceptual approach in his presentation to the client. One technique may be relevant to the performance of a variety of skills. The client is taught to think through basic concepts and to understand the relationship of techniques so that he can work out satisfactory solutions to his own problems of daily living when the teacher is not present.

To illustrate this principle, consider the teaching of such activities as clean-

Resources within the client

The Principle of Involvement

Problem-solving

Discovery

The Conceptual Approach

ing the mirror, dusting the table, mopping the floor, vacuuming the carpet, and brushing lint from a suit. Instructions in these activities could require several visits. In teaching conceptually, however, the emphasis is on the use of a pattern which is applicable to all these skills. Another example is the concept of organization used in activities such as making a bed, baking a cake, and polishing shoes; or, in the case of storage, arranging items in dresser drawers or medicine cabinets.

Patterns of skills

Conceptual teaching allows the learner to select from and give structure to the information provided by the teacher and encourages him to go beyond that information to work out his own methods and techniques. The teaching-by-concept method increases the effectiveness of teaching as the learner himself is stimulated to become more resourceful and less dependent upon the teacher for workable solutions.

□ It has been the purpose of this paper to discuss some of the major concepts which have determined and shaped our present-day practices in rehabilitation teaching. Let us remember that we are teaching individuals who differ in abilities and needs, but who have resources within themselves which can be utilized in the rehabilitative process. The subject matter we teach is centered around those daily living activities which are particularly applicable to the needs of individual clients in their environmental settings. The methods and techniques we have suggested here are tools designed to help the teacher in teaching individuals more effectively. When our clients learn to live again without sight through achieving a degree of self-dependence which is comfortable and satisfying to them, both personally and socially, then we, as rehabilitation teachers, will have met our objective.

Summary

Expanded Opportunities for Multiply Handicapped Children

—Continued from page 119.

□ The needs of multiply handicapped children cannot always be met in the same manner, nor can their progress be measured by the same means used with more fortunate youngsters. The staff of the Special Services Department are constantly striving to improve their techniques while recognizing that success in the developmental processes for severely handicapped children must often be measured by something other than the usual sets of criteria. The staff is confident that the program will continue to improve and will provide even better services to these children in the future.

A Final Word

Demonstrating the Relationship Between Three-Dimensional Figures and Their Two-Dimensional Representations to Blind Students of Mathematics

A cube feels like a cube to a blind person no matter how he holds it. All angles are right angles and all planes are at right angles to each other. When shown a printed diagram of a cube, however, the congenitally blind person is unable to picture this flat-surface representation as a three-dimensional figure, although those who are adventitiously blind, having seen, may still be able to visualize the picture of a block. The following is a description of an Isometric Representations Kit which was developed to help the blind student to understand the relationship between these two kinds of representations.

□ The "collapsible cube" will serve to illustrate the use of this kit in demonstrating structural isometric representations. (The cube, the triangular right prism, the rectangular right prism, and the parallelepiped are isometric rather than perspective.) Two rigid squares—planes—joined by four flexible vertical edges—arrises—make up the collapsible cube. It is constructed in this way so that it may be held as a cube and then flattened out as a realistic isometric representation.

To demonstrate the cube, the bottom frame is held firmly on the desk or other flat surface. The top frame is then held directly above the bottom frame, keeping the arrises taut (see figure 1). Then, the top frame can be moved at a 45-degree angle, or any angle, until it comes to rest partly on the bottom frame and partly on the desk (see figure 2). This procedure provides a sufficiently accurate two-dimensional isometric representation of a cube.

By reversing the process, the blind person can discover how a two-dimensional representation can be reconstructed into a three-dimensional figure. The student should use the thumb and fore-finger of his right hand to grasp the front and left edges of the top frame. He should gradually raise this frame, always keeping the vertical edges taut, until it is directly above the bottom frame. This portrays, kinesthetically, the actual development of a cube from a tactile-visualized isometric representation.

In similar fashion, the collapsible triangular right prism, rectangular right prism, parallelepiped, or any other structural isometric representation may be adapted as an instructional tool.

The rectangular right prism can be of significant use in teaching three-dimensional graphs, since a third (perpendicular) axis must be portrayed in addition to the customary Cartesian horizontal and vertical axes. This perpendicular axis is drawn from the origin into the area of the third quadrant, but implies a visualized altitude rather than a third quadrant magnitude. The blind student may be made aware of this relationship through the use of the collapsible rectangular right prism.

FREDERICK T. NEUMANN

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The "Collapsible Cube"

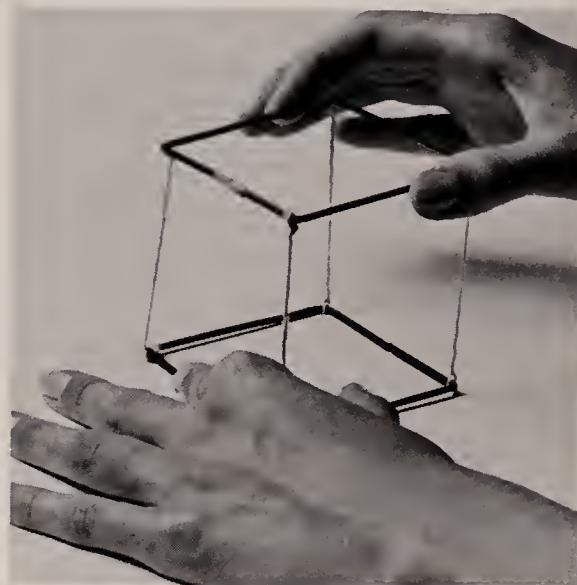


Figure 1.



Figure 2.

The bottom frame of the prism is placed firmly on the first quadrant of the graph, with the front and left edges of the rectangle coinciding with the x- and y-axes of the graph, and held in this position with the right hand. With the left hand the top frame is moved from its standard position directly above and parallel to the bottom frame to the left and down at a 45-degree angle until it comes to rest in the desired visualized position on the graph. Again, the arrises must be kept taut. The student will discover, on the graph, how a two-dimensional isometric representation may be converted into a three-dimensional structure.

To reverse the process, the student begins with the isometric representation of the prism in its flattened out position on the graph. Grasping the top frame with his left hand, the student should gradually raise it—keeping the arrises taut—until it is in its right-prismatic position directly above the bottom frame. Using this procedure, the student can develop kinesthetically and structurally the three-dimensional concept from the tactile-visualized two-dimensional representation on the graph.

As a structural device for understanding space concepts, the parallelepiped may be quite useful in its application as an isomeric representation. The student can experimentally develop an infinite variety of skeletal parallelepipeds as he moves back and forth between the structural concept and the isometric representation. This is accomplished by holding the bottom frame firmly against the desk with one hand and moving the top frame in any direction, keeping the arrises taut and the top plane parallel to the bottom plane.

In the attempt to provide a visualized representation of a cylinder, the outcome may be confounded with, rather than compounded of, both the isometric and the perspective. Two circles are needed to give a full perpendicular view of the top, even though the bottom circle would be "hidden" directly below the top visible circular plane (see figure 3). To suggest the appearance of the circular planes at a viewing position obliquely distant from the cylinder, however, ellipses models are needed. Attention is called to the fact that the back edge of the bottom plane would be hidden unless the representation is of a transparent cylinder (see figure 4).

The structural isometric representation of pyramids consists of a rigid frame serving as the perimeter of the base, a rigid axis serving as the altitude of the figure, and flexible arrises serving as intersections of the triangular faces of the pyramids. When the pyramids are erected with the axis, or altitude, perpendicular to the base, the arrises are naturally equal in length (see figure 5). It should be noted, particularly in the five-sided pyramid, that the vertical edges toward the distant or rear side of the figure, tend to be much more taut than the ones in the front of the figure. The justification for this is more expedience than mathematics, or hopefully, more accurate perspective than isometry.

Converting the three-dimensional pyramid to a two-dimensional representation is somewhat cumbersome. The pyramid is placed in the erect position with the left hand holding the frame of the base firmly against the desk. Grasping the top of the pyramid (at the upper end of the rigid axis altitude)



Figure 3.



Figure 4.



Figure 5.

with the right hand, it is gradually tilted backwards until it rests flat on the desk. As the vertical edges nearer the front grow longer and those nearer the back become shorter, there is a suggestion of the perspective in the representation, even though we must recognize that the front and back segments of the base do not alter perspectively (see figure 6). The pyramids may be tilted in any direction, changing the relative position of the arrises and axes. In some instances, the axis hides a back arris or a front arris may blockout the axis. As in the case of the collapsible cube, though not with the same degree of isometric precision nor with the same degree of relative reality, the three-dimensional pyramid may be converted into a two-dimensional representation and vice versa.

Wire coat hangers, string, and elastic were used to develop the original models of these three-dimensional figures. If a more rigid frame is desired, there are two other methods which the Regional Instructional Materials Center for Handicapped Children and Youth at Michigan State University has experimented with.

One construction method uses pipe cleaners and bar straws. In constructing the cube, for example, 12 pipe cleaners (each six inches long) and 12 bar straws (each five and a half inches long) are used. Four pipe cleaners are cut in half and each half is wrapped around the middle of a whole pipe cleaner to form a "three-pronged" connector. With the ends of eight of these connectors inserted into 12 straws the result is a rigid cube. Since the pipe cleaners can be bent in any direction, these materials may be used to construct any of the other figures, except the pyramids, which require elastic arrises. The straws and pipe cleaners, however, may still be used for the base of a pyramid. Geadistix Think Sticks have also been used. The introductory set of 220 pieces includes five-, six-, and eight-sleeve connectors; and two-, three-, four-, six- and eight-inch colored sticks; it costs three dollars.

Through efficient engineering, the ideas underlying these "homemade" figures might well be developed into sophisticated mechanical devices that would be both more useful and more adaptable in the teaching of arithmetic, algebra, geometry, and trigonometry. Still, the fact that better devices can be constructed should not preclude our making simple, reasonably realistic, homemade tools from some bent wire and bits of string. A suggested concept, rather than a precise construction, is often sufficient in giving the individual an awareness of one more aspect of an environment that is sometimes visually at odds with his tactile perceptions.

□ It may be that the congenitally blind person can never develop a realistically visualized image through tactile and kinesthetic media. At best, he may recognize reality by relating an isometric representation to a structural concept through the tactile-kinesthetic process of converting one into the other by means of structural isometric representations. If he is able to work productively with these concepts on his own level of appreciation, even though it may be a kinesthetic-tactile image lacking visual focus, his environment will, to that extent, become less mysterious and, therefore, more meaningful to him.



Figure 6.

Methods of construction

A Final Word

Teaching Rock and Roll Dancing to Totally Blind Teenagers

Over a period of years, a frustrating series of attempts have been instituted in the Seattle community to teach modern rock dancing to totally blind teenagers. First, teachers in the junior high school began working with the youngsters, showing them some steps, and taking them to social functions at which there would be rock dancing. The students, who were perhaps too young at this time to appreciate the social desirability of dancing, resisted the teachers' efforts. Next, an after-school class was set up by parents and teachers with a professional teacher from a dance instruction studio. In this case, the teens objected to yet another "class," the lack of individual instruction, and the teacher who, they claimed, was "square."

□ Most of this group of teenagers went on to high school where they began to realize the important role that learning to dance would have in their efforts to participate in social activities with their sighted schoolmates. At this point, the Seattle Parks and Recreation Department set up a special program of dance lessons for the blind students. Although the Parks Department staff were skilled in working with teenagers, their use of ballroom dancing technique (holding one's partner and following certain steps) was inappropriate in this case. And these young adults were well aware that modern rock dancing is non-tactual—couples face each other and dance at a distance of several feet from one another. Sometimes partners do not even face each other or even really dance "together."

After this experience, Community Services for the Blind (CSB) was asked to participate and to develop a fresh approach for solving this problem. CSB staff talked with the students, teachers, and parents. Concerning these earlier attempts, the teenagers themselves were able to explain quite clearly why these programs had been wrong for them. The teen coordinator at CSB, the junior author of this article, was also consulted. As president of the "Chandelles," a sorority at the high school attended by the blind students, she and many of her sorority sisters already knew many of them. The Chandelles, under her leadership, and with the cooperation of their boy friends, assumed responsibility for an informal dance instruction project.

The first problem was to establish exactly how teenagers do indeed dance. The various styles of rock dancing do not have names or set patterns to guide the novice. Most teenagers simply learn by watching others, picking up ideas, and eventually developing their own style. Here, then, was the difficulty in teaching rock dancing to visually handicapped teenagers. Realizing this, those students interested in teaching met and discussed different ways of explaining and demonstrating the various movements and steps. Using blindfolds, several

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Unsuccessful Attempts to Teach Dancing

CSB was asked to participate

Analyzing the problem

techniques were experimented with and it was discovered that it would be essential for the blind student to feel the way his instructor's body was moving, especially the neck, arms, back, hips, legs, and feet.

□ The first lesson was begun by having everyone simply stand and clap their hands in time with the music. Since no two teenagers dance the same, it was decided that all teaching would be done on a one-to-one basis to avoid any confusion that might arise by learning from instructors having two very different styles. Each instructor explained and demonstrated, with music, the way to move the arms and legs. In the first lesson the movements were kept relatively simple and progress was kept relatively in check. Two considerations were involved in choosing this approach: one, most of the learners were having to use their muscles in new ways and, two, by not tiring as quickly, they could be more relaxed and could enjoy simply moving their arms and legs in rhythm with the music.

The First Lesson

At the next lesson, it was obvious that the students had been practicing at home, for they were much more coordinated and relaxed and were able to move more easily. Their progress was encouraged by the teen "teachers" and new steps and movements were then introduced. They soon learned several variations and were able to let their movements flow out of the beat of the music. The steps that were taught were limited to those which let the dancer stay in relatively the same spot so that he did not end up off in a corner of the room. By the end of the second session, the students had learned all of the fundamentals and were ready to go to a dance. They were a bit reluctant to "go public" so soon, but most were persuaded to attend an up-coming dance.

The second lesson

The night of the event, they were understandably quite nervous and were allowed to sit the first few dances out. Finally, the group of "teachers" helped their students out onto the dance floor and got them paired off. Their dancing was quite good and absolutely indistinguishable from the dancing of sighted teenagers. After a few dances, they were able to go out on the floor and back to their seats without help.

Success

The total program consisted of six sessions held after school in various parts of the school building and included eight sighted teenager-"teachers" and six totally blind teenagers. The sighted students had one initial orientation session with professional staff at CSB to learn about program and agency goals and to discuss how blind people learn skills.

□ In summary, the following points can be made about special programming for blind youths:

Summary and Conclusions

1. Young people are often apt to consider agency programs and personnel "square" or a "drag." This must be anticipated and come to terms with.

2. Innovative approaches to programming for young people must involve input from sources outside the agency, school, or recreation center setting. This input will insure versatility, flexibility, and vitality in the program.

3. Teenagers work best with other teenagers or young adults. Professional sovereignty and proprietary practices should be so structured that real program development done by young people themselves will not be excluded.

4. It is recommended that service agencies and institutions develop a

youth service auxiliary or cooperative organization, such as CSB has with the Chandelles in Seattle. It is through such a structure that an adult staff member can be most effective, that is, by assuming a consultative, supportive, and trouble-shooting role.

5. Programs like the one just described will not be really successful unless they include: (a) integration of the blind youngster in meaningful social, cultural, and educational activities in the community; (b) follow-up, when necessary, to handle frustrations and failures in the application of the skills and experiences gained; and (c) education of the sighted people in the community so that the personal gains of the young blind person will be understood and accepted.

Jewish Guild Opens City Center

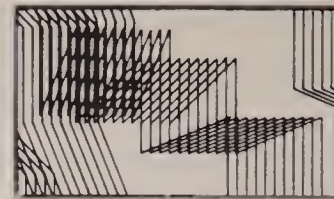


The new \$7.5 million City Center headquarters (left) of the Jewish Guild for the Blind, located near Lincoln Center at 15 West 65th Street, New York City, is scheduled to open this spring. The 12-story structure contains 137,000 square feet and will allow the Guild to expand its broad rehabilitation program and its sheltered workshops. One interesting innovation in the new building will be a 60-foot indoor "mobility training area." Also included are a library, children's play area, sculpture garden, and extensive recreation facilities. Matthew J. Warshauer is the architect.

Answers to Accreditation Questions

NATIONAL ACCREDITATION COUNCIL FOR AGENCIES

SERVING THE BLIND AND VISUALLY HANDICAPPED



Q. We want to qualify for accreditation but our auditors and the person who keeps our books are not familiar with Standards of Accounting and Financial Reporting for Voluntary Health and Welfare Organizations. We understand that we should use these standards to supplement the Self-Study and Evaluation Guide in our self-study. Where can we get a copy?

A. You or your auditors can obtain the standards from the National Health Council, 1740 Broadway, New York, N.Y. 10001. Note that the street number is different from that given in your *Guide*; the Health Council moved after the *Guide* was published. The price is \$5.75.

Incidentally, the committee of the Commission on Standards and Accreditation of Services for the Blind (COMSTAC), which developed the NAC financial standards, included several representatives of the group that developed the *Standards of Accounting and Financial Reporting for Voluntary Health and Welfare Organizations*. The COMSTAC standards and the NAC *Self-Study and Evaluation Guides* were the first application of these standards to a special category of agencies.

Q. We don't know where to begin. How can we get guidance in applying these standards to our accounting and financial reporting?

A. Since these standards are not just for agencies serving the blind, but have since been adopted by many other groups, your local health and welfare council or council of social agencies can probably refer you to an accountant who is familiar with the standards and who has helped other agencies to revise their bookkeeping and reporting systems in order to comply.

Many health and welfare councils have someone on their own staffs who helps

agencies do this. Regardless of whether or not you are a member of your local council, you should be able to get help there. For instance, the council may refer you to the executive of an agency in which the standards have recently been applied.

The professional association to which your auditor belongs should also be able to provide him with information about the standards and how they are applied. Increasingly, states and municipalities are requiring that all agencies keep their books and do their reporting according to the standards. Thus, it is to any agency's advantage and to any accountant's advantage to become thoroughly familiar with these standards and to begin to utilize them.

Q. Do these Standards of Accounting and Financial Reporting set a definite ratio of fund-raising costs to the amount raised—a ratio that an agency may not exceed?

A. No. On page 69 of the *Standards*, it is stated: "It is fully recognized that the most serious single concern of many contributors, and of many governmental bodies that require public reporting of the finances of certain charitable organizations, is to ascertain agencies' fund-raising costs, and the relationship of these to total funds raised. This concern and preoccupation has also led to a natural and understandable interest in establishing comparative criteria, or even arbitrary limits, for what might be considered a proper percentage of fund-raising costs.

"If it were possible to prescribe a single basis for comparison, or method of calculating a fund-raising cost ratio that would be applicable uniformly, such efforts would be most useful. Facts do not appear, however, to justify expectations that this can be done. . . ."

This, of course, does not mean that fund-raising costs are not subject to ques-

tion. One of the National Accreditation Council standards reads: "Fund-raising costs are kept at a minimum and are not disproportionately large in relation to the costs of the services provided by the agency."

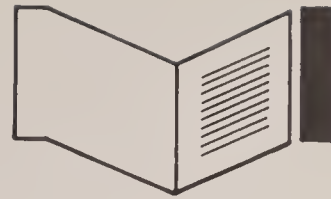
NAC considers the situation of each agency on its merits. No agency is required to comply with some arbitrary percentage of fund-raising costs.

Q. In financial reporting, is there a difference between expenses for public education and for public information?

A. Yes, there is a very big difference. For example, if you conduct a program to educate the public about the symptoms of blinding diseases or about precautions that should be taken to prevent blinding accidents, such a program should be classified as "public education." It is a program service function, just as mobility training or library services are program service functions.

On the other hand, suppose you are planning a picnic for blind children as part of your recreation program. You send an announcement to the children's parents and a news story to the local paper. This is "public information" about your own program. The costs related to it are chargeable to your recreation program. There is no public education function as such. Your various public information costs should be allocated to the functions that they serve, such as specific service programs or fund-raising.

What is your question about accreditation? Send it to the National Accreditation Council, Suite 1406, 79 Madison Avenue, New York, N.Y. 10016. If it is of general interest, we will try to answer it in this column, but, in any case, you will receive a direct, prompt reply.



Management of the Patient With Subnormal Vision, by Gerald Fonda. 2nd ed. C. V. Mosby Company (3207 Washington Boulevard, St. Louis, Missouri 63103), 1970, ix + 167p. \$13.00. This up-dating of a work first published in 1965 contains added information about recent developments in the field of optical aids.

From Broom Shop to Rehabilitation Center, 1895-1970, by Barbara J. Wright. Illinois Visually Handicapped Institute (1151 South Wood Street, Chicago, Illinois 60612), 1970, 7p. A brief history of the Chicago Industrial Home for the Blind which, in 1957, became the Illinois Visually Handicapped Institute.

The Partially Sighted Trainable Mentally Retarded Child, by Mary Jo Fleming. *The Journal for Special Educators of the Mentally Retarded* (107-20 125th Street, Richmond Hill, New York 11419), Vol. 7, No. 1, Fall 1970, pp. 64-70. The author discusses the necessity of adapting and combining educational methods and techniques designed specifically for (1) the partially sighted child and (2) the trainable mentally retarded child, since little written material exists concerning the child with this double handicap.

Parents Talking, by J. N. Langdon. *The New Beacon* (Royal National Institute for the Blind, 224 Great Portland Street, London W1N 6AA, England), Vol. 54, No. 643, November 1970, pp. 282-88. A series of interviews conducted with the parents of blind children resulted in a surprising number of complaints regarding the inadequacy or long delay in receipt of non-medical counseling.

Psychological Aspects of Low Vision Rehabilitation, by Helen M. Mehr, Edwin

B. Mehr, and Carroll Ault. *American Journal of Optometry and Archives of American Academy of Optometry* (1506 Foshay Tower, Minneapolis, Minnesota 55402), Vol. 47, No. 8, August 1970, pp. 605-12. The authors started an orientation and discussion group comprised of partially sighted individuals, which met at the Vision Rehabilitation Center of Santa Clara County, California. The conclusions presented in this article are based on the personal experiences of the participants.

The Auditory Abilities of the Blind as Compared With the Sighted, by Jack F. Curtis and David M. Winer. *The Journal of Auditory Research* (C. W. Shilling Auditory Research Center, Box N, Groton, Connecticut 06340), Vol. 9 No. 1, 1969, pp. 57-59. The authors discuss the results of auditory testing and the implications for developing better travel-training techniques for the blind.

A Comparison of Blind and Sighted Children on a Tactual and Performance Test, by Linda Eaves and Harry Klonoff. *Exceptional Children* (Jefferson Plaza Suite 900, 1411 S. Jefferson Davis Highway, Arlington, Virginia 22202), Vol. 37, No. 4, December 1970, pp. 269-73. A discussion of the theories concerning sensory compensation in the blind based on a test comparison of 40 congenitally blind and 40 sighted children.

The First Thirty Years, by Perry Sundquist. *The Council Bulletin* (The California Council of the Blind, Inc., 205 South Western Avenue, Room 201, Los Angeles, California 90004), Vol. 11, No. 5, November/December 1970, pp. 18-26. Text of a speech delivered by Mr. Sundquist at the convention of the California Council of the Blind, October 17, 1970, giving a brief history of the National Federation of the Blind.

Criterion Shifts in the Measuring of Tactile Masking, by George A. Gescheider, Daniel D. Herman, and Jeffrey N. Phillips. *Perception & Psychophysics* (Psychonomic Journals, 1200 West 34th Street, Austin, Texas 78705), Vol. 8, No. 6, December 1970, pp. 433-36. Sighted subjects were used in the authors' tests of vibro-tactile stimuli detection.

Intermodality Relations in Localization in Blind and Sighted People, by David H. Warren and Herbert L. Pick. *Perception & Psychophysics* (see address above), Vol. 8, No. 6, December 1970, pp. 430-32. Report on a series of experiments to gather data on the relative importance of vision, audition, and proprioception in determining spatial direction in a conflict situation.

The First 'Miracle Worker,' by Lawrence Lader. *Today's Health* (535 North Dearborn Street, Chicago, Illinois 60610), Vol. 48 No. 9, pp. 42-43, 75-76, 79-80. Short biography of Samuel Gridley Howe with emphasis on his educational achievements in the case of Laura Bridgman.

An Experience Approach—Through the Cemetery, by Constance R. Kautz. *Reading Improvement* (Academia Press, P. O. Box 125, Oshkosh, Wisconsin 54901), Vol. 7, No. 2, Fall 1970, pp. 54-55. Mrs. Kautz, the director of the Program for Visually Handicapped Children, Allegany (N. Y.) Central School, describes her use of an old cemetery across the road from the elementary school to help two young blind girls learn about the outside world.

It Started With Braille, by Mary Louise Meere. *The Instructor* (Danville, New York 14437), Vol. 80, August/September 1970, pp. 134-35. Mrs. Meere tells of the great interest shown by her sixth-graders in a project concerning how blind people read and write
—M.M.R.



■ Seven additional agencies have earned charter accredited membership in the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped: Columbia Lighthouse for the Blind, Washington, D.C.; Dallas (Texas) Services for Blind Children; Lions Club Industries for the Blind, Durham, North Carolina; State of Maine Division of Eye Care, Augusta; Metropolitan Society for the Blind, Detroit, Michigan; Minneapolis (Minnesota) Society for the Blind; and Shreveport (Louisiana) Association for the Blind. There are now 27 institutions in 18 states and the District of Columbia that have been granted accreditation by NAC.

■ Miss Margaret Anne McGuire, member of the board of directors of the National Accreditation Council and a former director of the New York State Commission for the Blind, died on December 20, 1970, after a long illness. In response to the desires of Miss McGuire's many friends to honor her memory, the M. Anne McGuire Memorial Fund has been established by the board of directors of the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped (Suite 1406, 79 Madison Avenue, New York, N.Y. 10016). The Fund will be administered by the board and will be used to strengthen and extend the improvement of services to blind people through the application of standards in the accreditation process, a cause to which Miss McGuire devoted so much of the latter years of her life.

■ The Seeing Hand Association of Wheeling, West Virginia, will be holding the Seeing Hand Camp for the Adult Blind on July 25-31. The camp is open to a limited number of blind adults from any area who are between

17 and 60 years of age and in good health. Further information is available from Miss Ethel Clare Elikan, Executive Director, Seeing Hand Association, Inc., 73 Market Street, Wheeling, West Virginia 26003.

■ Dr. Merle E. Frampton, director of the New York Institute for the Education of the Blind since 1934, retired from that post on March 1, 1971. Dr. William D. May, dean of Johnson State College, Johnson, Vermont, since 1956, was elected to succeed Dr. Frampton.

■ In January, the Royal Commonwealth Society for the Blind, formerly in London, moved its headquarters to Sussex. The new address of the Society is Commonwealth House, Heath Road, Haywards Heath, Sussex, England; cable address: COMBLIND, Haywards Heath; telephone: 0444 2424.

■ The President's Committee on Employment of the Handicapped has established a new subcommittee on Workshops. Robert E. Watkins, national executive director of Goodwill Industries of America, Washington, D.C., has been appointed chairman of the subcommittee. Rudolph E. Elmer, executive director of the Lighthouse for the Blind, Seattle, has been appointed vice chairman. According to Harold Russell, chairman of the President's Committee, "This subcommittee will make it possible for the President's Committee to focus on expanding employment opportunities for the handicapped through training, as well as improving subcontracting links between workshops, the federal government, and private industry."

■ The Kulas Foundation of Cleveland, Ohio, recently awarded a grant of \$25,000 to the Library of Congress for the purpose of beginning work on a set of computer programs for translating music notation into braille. The Library's Division for the Blind and Physically Handicapped and the American Printing House for the Blind, Louisville, Kentucky, will work jointly on the three-year project.

■ Helen Herries Day, former editor of *Searchlight*, a braille magazine for children published for many years by the New York Association for the Blind, died January 10 in the Bronx, New York. She was 80 years old. Though she retired from the editorship in the 1940's, Miss Day continued to contribute to the magazine until it was discontinued in 1969.

■ Heads of the six major organizations of and for the blind are holding semi-annual, informal meetings in an attempt to coordinate their efforts on behalf of blind persons. Two meetings were held in 1970; the first meeting of 1971 is to be held May 2 in Fort Lauderdale, Florida.

Attending the meetings are Dr. Douglas C. MacFarland, American Association of Workers for the Blind; Judge Reese H. Robrahn, American Council of the Blind; Carl Davis, Association for Education of the Visually Handicapped; Burt L. Risley, National Council of State Agencies for the Blind; Kenneth Jernigan, National Federation of the Blind; and M. Robert Barnett, American Foundation for the Blind. A system of rotating the chairmanship has been adopted, with Mr. Jernigan chairing the May 2 meeting.

According to Joseph Kohn, former president of the National Council of State Agencies and chairman of the second 1970

meeting, the participants "made it clear that this is not an attempt to develop a super agency. Nor is it an effort to have every national organization adopt a uniform point of view. Rather it is designed to explore those areas where they agree and to coordinate their efforts."

■ The American Foundation for the Blind, New York City, is currently conducting a one-year, two-part study for the Division for the Blind and Physically Handicapped of the Library of Congress, to determine the feasibility of producing recorded magazines in lightweight plastic discs. These discs, often called "sound-sheets," would be very inexpensive to produce and mail and would make it possible for each reader to receive his own copy of a magazine. The final report of the study (a preliminary report has already been submitted) is to be completed late this spring.

Correction

The last sentence of the "In Brief" item concerning the transfer of 40,000 disc recordings of textbooks from Recording for the Blind, Inc., New York City, to the South Carolina Commission for the Blind, Columbia (*New Outlook*, January 1971, p. 37), should have read: "The disc recordings will be made available on free loan to all qualified borrowers throughout the United States," not just to residents of South Carolina.

Appointments

■ Royal National Institute for the Blind, London: **Eric T. Boulter**, deputy director.

■ West Virginia Division of Vocational Rehabilitation, Services for the Blind and Visually Impaired: **Joseph E. Lobuts**, chief.

■ Mississippi Department of Public Welfare, Rehabilitation Services for the Blind: **Billy M. Day**, chief.

■ National Therapeutic Recreation society (by election): **John A. Nesbitt**, president; **Sidney A. Acuff**, president-elect.

■ Regional libraries for the blind and physically handicapped, new head librarians: Baton Rouge, Louisiana, **Mrs. Blanca Lastrapes**; Daytona Beach, Florida, **Mrs. Sondra Honoree**; Helena, Montana, **Richard Peel**; Jackson, Mississippi, **Mrs. Zelda Davis**; Milwaukee, Wisconsin, **Mrs. Betty Onufrock**; Richmond, Virginia, **Robert Baylor**; Topeka, Kansas, **Mrs. Ellen Zabel**.

■ League for the Handicapped-Goodwill Industries, Detroit: **Martin G. Kope** associate director for supportive services.

■ American Foundation for the Blind, New York City: **Paul N. King**, regional consultant for the northeastern states.

Coming Events

April 4-8 American Personnel and Guidance Association, Atlantic City, New Jersey.

April 14-16 President's Committee on Employment of the Handicapped, Annual Meeting, Washington, D.C.

April 18-24 Council for Exceptional Children, 49th Annual International Convention, Miami Beach.

April 26-May 1 Association for Research in Vision and Ophthalmology, Annual Meeting, Lido Beach, Florida.

April 29-May 1 United Cerebral Palsy Associations, Annual Conference, Denver.

May 1 National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, Annual Meeting, Fort Lauderdale, Florida.

May 2-6 National Industries for the Blind, Spring Workshop, Fort Lauderdale, Florida.

May 9-12 International Association of Rehabilitation Facilities, Las Vegas.

May 16-21 National Conference on Social Welfare, 98th Annual Forum, Dallas.

May 17-20 National Braille Association, 11th National Conference, Chicago.

May 24-26 American Ophthalmological Society, Annual Meeting, Hot Springs, Virginia.

June 6-10 Special Libraries Association, San Francisco.

June 20-24 American Medical Association, Annual Convention, Atlantic City, New Jersey.

June 20-26 American Library Association, Annual Convention, Dallas.

June 22-23 American Diabetes Association, 31st Annual Meeting, San Francisco.

June 23-26 American Optometric Association, 74th Annual Congress, Houston.

June 27-July 2 American Physical Therapy Association, Annual Conference, Boston.

June 27-July 2 National Education Association, Annual Convention, Detroit.

July 18-21 American Association of Workers for the Blind, Biennial Meeting, Richmond, Virginia.

July 25-30 International Association of Applied Psychology, 17th International Congress, Liege, Belgium.

August 4-8 Blinded Veterans Association, 26th National Convention, Miami Beach.

October 25-29 50th Anniversary Celebration, American Foundation for the Blind, New York City.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

Sensi-Quik

The Touch Cane for Walking
Faster with Safety



The New Fiber-Glass Cane

Sensi-Quik's shaft is made of large diameter, tapered tubular fiber-glass with gleaming white pebble finish, and has a bright red band at its tip. The smart-looking contour handle is of black vinyl. The 1/2-inch diameter, diamond-hard, tungsten-carbide working tip resists wear, and produces sharp, useful touch information. The cane is put together with epoxy, as fiber-glass golf clubs are, to withstand repeated sudden impacts.

The Sensi-Quik fiber-glass model comes with either crook or contour handle and either carbide or replacement steel tip. Sensi-Quik is also available in high-strength, nickel-plated, steel shafts recommended for 50- to 60-inch canes when extra strength is desired. The steel shaft adds three to four ounces to the weight of the cane.

Canes are made on individual order in any length from 34 to 60 inches.

Developed and distributed by the Go-Sees, a non-profit corporation, Sensi-Quik canes are not sold. They are supplied to anyone who joins the Go-Sees and pays a membership fee of \$5. They are also available through agencies to individual trainees at a reduced rate of \$4 (they must be ordered in even-inch lengths).

Persons or agencies interested in the Sensi-Quik cane are invited to contact



Along with the Sensi-Quik cane, the Go-Sees provide an instructional manual entitled "Touch and an Occasional Tap." It is available on disk and tape and in braille and ink-print. In addition to stating the philosophy of the Go-Sees, the manual teaches the vocabulary of "cane talk words" that enable the traveler to respond quickly and deftly to the messages his cane picks up from the environment. The manual is available on loan from the address below.

Franklin S. Clark
The Go-Sees
166 East 92nd Street
New York, N.Y. 10028

THE NEW Outlook FOR THE BLIND

May 1971 Volume 65 Number 5

Articles

- 137 Early Personality in the Congenitally Blind Child
Lenore L. McGuire, Ed.D. and C. E. Meyers, Ph.D.
- 144 The Importance of Community Recreation Programs
for Visually Handicapped People
E. Elaine Eastman and Sue Blix
- 149 Comparative Methods in Teaching Cooking to the Congenitally
vs. the Adventitiously Blind Adult
Patricia E. Freyberger
- 152 Building Self-Confidence in the Multiply Handicapped Blind Child
John J. Knight
- 155 The Optacon Reading Program at the Monroe Public School
Carolyn Weihl

Departments

- 163 Editorial Notes
Robert L. Robinson
- 164 Current Literature
Mary Maie Richardson
- 165 News in Brief

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Early Personality in the Congenitally Blind Child

There is only a small literature on the psychological development of the congenitally blind. Wright's¹⁶ somatopsychological review is essentially determined from persons with acquired blindness, mostly adolescents or adults. A search of the literature reveals only a dozen reports of any kind in the past 10 years in which the subjects were the congenitally handicapped. Other than papers by Elonen^{2,3,4} and Guess^{9,10} the only interest shown has been in psychoanalytic circles,^{6,7,8,12} with the focus on deficits in ego development.

This paucity of information is surprising in view of the interesting and serious development problems which blind children can face. In California, for example, one fourth of those identified as blind under 18 years of age are in mental institutions or waiting for placement.¹³ In visiting a nursery school serving blind children (with or without sighted children) one is struck by the prevalence of disturbed interpersonal relations and of other behaviors that are so chronic as to suggest retardation and autism and that often lead to institutional placement. Such labeling and categorization have, in many instances, been contradicted by highly successful academic achievement in later years of childhood, though adjustment problems may not have been entirely conquered.

□ It was the purpose of this study to advance the state of information and theory on the personality development of the congenitally blind. The study sought, first, to determine the prevalence of problems in personality growth; second, to determine whether personality problems, if any, are the inevitable correlates or consequences of particular biomedical etiologies, or whether they are unrelated to such etiologies; and, third, to make progress toward a theory of relation between deprivation of vision and the sort of problems exhibited by the congenitally blind.

While it is possible to hypothesize that a particular biomedical condition would predispose or determine such results as autism, there are compelling reasons to advance psychological connections between the *physical* deprivation and the *personality* consequences. Our own observations led to the conviction that behavioral phenomena occurred without regard to any specific biomedical etiology, and that there was no association between such etiology and the form of the maladjustment. Further, as Rheingold¹¹ has said, "... not physical, but visual contact is at the basis of human sociability. . . . The

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Purpose of Present Study

Vision and personality

basic and primary activity is the infant's visual exploration of his environment. . . ." (p. 169).

Walters and Parke¹⁴ have convincingly reviewed the case for the significance of vision in the formation of early attachments in sighted children. It is also well established, as summarized by Fantz,⁵ that vision is extraordinarily significant for normal brain growth and cognitive function in animals less dependent on vision than man. It is, therefore, easy to anticipate an unusual risk of difficulty in early personality formation in the congenitally blind.

□ This study employed young blind children in the southern California area who were conveniently available for observation and who otherwise met criteria of age, sufficiency of information, and absence of primary retardation or transcendent problem other than the visual. The larger portion of the information was derived from 27 totally blind children who were followed in one way or another for at least one year and up to 8 years for some. Supplemental information was also gathered to cover their histories from birth to most recent contact, which occurred variously at four years of age to their late teens.

Fifteen of the 27 cases were known through private consultation in the home and clinic or through community agency contacts supplemented by home visits, or a combination of these. Twelve cases were known through a state hospital for the retarded which had a special program for the blind-retarded. These 12 cases were the residual after elimination of children having primary retardation, severe multiple handicaps, or organic involvement, conditions which would have meant that the blindness would not have been the central issue. In the 12 cases used here, there was medical diagnosis of "retardation" and a legal commitment, but the detailed picture of the history of placement and of subsequent development in many cases raised serious questions about the label of retardation. In general, these 12 hospitalized cases had the same characteristics as the non-hospitalized: able-bodied other than the blindness, young, and with histories of creating difficulty because of being withdrawn or acting out. Having 12 institutionalized cases of a total of 27 represents a higher proportion of institutionalization than the 25 percent mentioned above, but proportional representation was not sought for this report. Actually, there was so little difference in the behavior of the institutionalized and non-institutionalized that the results were combined. Institutionalization was the consequence of severity of symptoms rather than their quality. Some institutionalized children do not, however, have particularly severe degrees of difficulty; many factors of family life affected willingness to institutionalize children. In general, those parents who obtained the proper type of assistance were the ones who avoided institutionalization. The families of these 12 cases were also visited, each at least once. Contact on a twice-a-week basis was maintained for two years or more with five of the families. On these 27 well-known cases, the following sources of information were available: 1) Home visit interview information, available for all children. Parents of non-hospitalized children were

Subjects and Procedures

Twelve in an institution

Results for two groups combined

Sources of information

seen an average of twice a week for from two to five years. 2) Information from therapy sessions with child, available for the 15 non-hospital cases, gathered over a period of two to four years. 3) Agency record information concerning medical, psychological, and social work evaluations of child and family. 4) Hospital records, including medical examination, social worker appraisal, psychologist appraisal. These records also included letters concerning pre-hospital diagnoses and parental letters concerning the child. Besides the 27 rather intensely studied children, there was information derived from the rosters of public school classes for the visually limited, consultative work with schools and centers, and family counseling contacts.

Blind children are few in number and it was not possible to assign groups of them to treatments for systematic testing of the hypotheses. It was only possible to employ the knowledge of individual cases to the hypotheses; for example, was mother hostility shown in doll play? The cases were studied to yield judgments of the presence or absence of the qualities hypothesized. There was no other way to attack the problems put forth here, except by utilization of available cases.

□ Table 1 lists the sex and the medical diagnosis of the 27 children. Over half lost their sight through retrolental fibroplasia. Boys predominate in the non-retrolentals. Table 2 lists some kinds of problems clearly evident from the perceived behavior of the children, from the parent statement, or, otherwise, from the case record.

The data show some answers to the questions raised. As to prevalence of problems no rate can be developed, for it was impossible to discover and observe all blind children of the area. The most likely omissions from observation would be the in-migrant children not yet known to any authority or service, and children in impoverished or minority status, whose parents are less likely to have sought help. Making such allowances, and with some knowledge about a considerable number of children through various sources, the question about prevalence of problems is answered by the indefinite but positive statement, "most of them." To put it another way, to be congenitally blind puts the child in the high risk category for personality problems.

The next question concerns behavior in relation to etiology. The adjustment problems were found with all the diagnoses. Nothing that one would find in the retrolentals would not be found in the others, and vice versa. In fact, there was no evidence of a typology of personality of any kind, by sex, etiology, prematurity, or otherwise. The problems found were general and, while similar to those in normal children, they were more intense and troublesome. Three chief features stand out as indicated in Table 2: 1) an elective autistic type of behavior which was apparently not so much a withdrawal as a purposeful passive aggression; 2) defiant and upsetting behavior seeming to be a continual demonstration of power; and 3) verbalized self-concept of badness.

Special attention might be drawn to the 12 hospitalized children, whose problems, it was insisted above, were like those of the unhospitalized but more severe. What evidence is there that the diagnosis of retardation could

TABLE 1
Medical Diagnosis and Sex of Subjects

Diagnosis	M	F	Both
Retrolental fibroplasia	5	10	15
Brain hemorrhage	1	0	1
Congenital anophthalmia	1	0	1
Congenital optic atrophy	2	2	4
Alternate crossing; astigmatism	1	0	1
Retinoblastoma	1	0	1
Congenital absence of por- tion of optic apparatus	1	0	1
Bilateral congenital cataracts	1	0	1
Albino	1	0	1
Congenital glaucoma	1	0	1
Totals	15	12	27

Results

Relation of behavior to etiology

Questioning the diagnoses of retardation

Percentage of Cases
Clearly Showing
Problem Indicated
(rounded off to the
nearest whole number)

TABLE 2
Problems of the Subjects

I. Disturbed Interpersonal Relationship With the Mother	
a. Destructive toward mother's property	47
b. Hostility toward mother doll or mother figure in therapy	73
c. Directs negative or hostile verbalization toward mother	87
d. Physically punitive toward mother or expresses desire to be so	73
II. Disturbance in Peer Play	
a. Frequently plays by himself	93
b. Controlling in peer play	60
c. Verbalizes a hostile manner in peer play	40
III. Inability to Pursue Independent Play to Age-Level Criterion	
a. Frequently sat and rocked, twirled, jumped, or lay on the floor	87
b. Preferred to listen to music	80
c. Played repetitively with same object or type of object	67
d. Took apart objects or toys	46
e. Preferred exploring physical environment to social interaction	53
f. Preferred interaction with mechanical objects rather than persons	53
IV. Language Disturbance at Varying Age Levels	
a. Echolalia present or predominant	46
b. Referred to self as "he" or "she"	46
c. Refused to respond through speech	40
d. Would not use "yes" or "no"	40
e. Repeated from memory songs or commercials or commands	80
f. At some point speech development indicated pathology in usage or in content	96
V. Cognitive Impairment Demonstrated at Varying Age Levels	
a. Gave the impression of not being able to follow thought progression	80
b. Refused to read or was not cooperative	80
c. Gave inappropriate responses	80
d. Denied self-involvement in errors	53
e. Made deliberate errors	93
f. Gave opposite response to parental training demands	67
g. Experienced difficulties in changing activities	87

be challenged? First, it is emphasized that blind children commonly exercise a form of control by withholding cooperation and compliance, refusal to learn, etc., and do not appear unwilling to be thought of as stupid. The records of nine of the 12 hospitalized children each contain at least one contradiction of retardation and sometimes many of them: history of normal acquisition of speech; recorded commentary after observation by hospital psychologists and social workers of their belief that retardation was not the problem; mention that a three-year-old had an adult vocabulary; ingenious quality of the child's harassment of the parent, and the like. The study of the commitment history leads to the conclusion for all 12 that it was the harassment of the parent which led to the commitment: "The par-

Commitment history

ents have had it," or, "If it were not for the severe problems caused by the child's behavior, the parents would not have filed an application."

□ The behavior resembling autism probably grew out of the first-year self-preoccupation. The typical blind child cannot of course visually scan his surroundings. He omits the normal early locomotion of rolling over, creeping, and crawling, and the concomitant distal-spatial exploration. This omission is attributed to the lack of distal perception normally enjoyed in the prelocomotor months, and to the lack of incentive of distal objects. He seems to be denied the usual exploratory attack upon his environment, normally expected in an animal species. The blind child does not, of course, visually scan for the source of sound. The first locomotion is usually a delayed walking. Hence, in the period of about eight through about 14 to 15 months, rather than the normal exploring, the child has stayed in place, spending the time rocking and eye-poking. Later he may sit and rock at the radio or record player, so that he soon has a well established self-preoccupation habit, easy to resort to for passive defiance later. Interpersonal problems appear during the early years in excessive attention-getting, resistance, destruction, defiance, repeated spilling of milk, pulling down of objects, throwing anything throwable, as if to maintain the power to upset others. The brighter children spend more time with harassment, and do it with more cleverness.

The early school years show elaboration from these beginnings, particularly in more involved upsetting of others, defiance, and destruction. The pattern continues into nursery school. Many parents have by now been so upset by the behavior as to seek clinical study, sometimes resulting in placement as mentally retarded. Further segregation occurs at school age, when some children are rejected as incapable, others taken out as uncontrollable, leading in some more cases to institutionalization. Many others not institutionalized are out of school because of behavior problems.

Much free time in school is in solitary rather than cooperative play; interpersonal behavior may show hostility and attempts to dominate. School achievement is poor, though some of the under-achievement is a continuation of the stubbornness that dated from the earliest interpersonal reactions. Some refuse to learn braille, though they could do so easily. Some consistently refuse to do correct papers, polluting their work with deliberate errors. Speaking openly about fooling their teachers and parents into thinking they cannot learn is frequently experienced.

Much of this behavior is "normal," in that it is common to children generally, but it is in much greater concentration here than in sighted children. The distress of the parents leads to finding ways out, and by the time the children are pubertal, a considerable proportion of them have been institutionalized, a proportion 100 times greater than for sighted children. While it is true that some of these individuals are so multiply handicapped that institutionalization made complete sense, many seem to have been committed more for their refusal to adapt than for an inability to do so.

□ When one considers that the blind child is deprived of one of his two cognitively important channels, one may postulate a cumulative deficit.

Autistic-like Behavior

Behavior and placement

"Normal" behavior

The Role of Environmental "Control" in Development

There is no visual localization of the sound the child hears. Learning of things and people in space is retarded if not altogether deprived. A normally sighted child, even when he but gazes at his environment, has a "control" over it at least in visually locating sources of auditory and touch stimulation, especially those made by people. When he becomes locomotor, he visually guides himself to more and more compartments of his environment, acting upon these, handling, weighing, arranging; and with people, approaching, anticipating their response, friendly or reproofing. He develops a command over many aspects of his relations with people because vision permits testing at a distance. He can retreat or hold back when necessary. By monitoring facial expressions, he can tentatively try out his action or his speech. The sighted child can imitate others as he follows them, repeating their adaptive actions and their non-verbal gestural communication.

The psychological reality of this testing out at a distance and this imitation of others in the sighted child is that he is in control of the process. There is so much of interest that the child needs no incentive to grow up in most attributes the way he is expected to. Thus, behavior development is to that extent intrinsically motivated, not guided by others. In contrast, the congenitally blind child has difficulty in exploring his environment to control it, not only because his exploration is not visually stimulated, but also because of the greater anxiety of his elders. His development must depend much less on self-initiated, self-controlled imitation of his family; of necessity it must be guided from without to a much greater degree. This would be bad enough, but such guidance is too often by anxious parents protectively concerned, actively trying to supervise, not able to relax in the enjoyment of the child. The child does not control his own time and development, which are too much involved in interpersonal activity, with a relative absence of those many qualities subsumed under such concepts as ego and independence.

This disturbed interpersonal relation may thus be tentatively interpreted as a failure to develop what White¹⁵ calls "competence." The failure seems almost implicit in blindness. Behavior is a constant contest, an attempt to take and maintain some control over persons in the environment, who apparently are considered only as contestants. So interpersonal behavior is always "personal," not objective and relaxed, with continued competition, the attempt to show mastery, the unsatisfied competency drive.

□ The conclusion drawn is that the behavior disturbances have a psychogenic base. They are a high risk of, but not inevitable to, congenital blindness and do not seem to be related to a biomedical etiology of the blindness.

Incentives and development

Failure to develop competence

Conclusion

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The Importance of Community Recreation

Programs for Visually Handicapped People

Recreation programs are important for two reasons: 1) every individual needs diversion and physical activity; and 2) recreation provides an excellent avenue leading to community integration. Recreation programs involving visually handicapped people are important for these same reasons and also for their role in rehabilitation. Since the turn of the century, sociologists and community planners have become aware of the increasingly important role that recreation is coming to play in the lives of individuals whose life expectancy is greater, whose work life ends in retirement, and, with the advent of the shorter work week, whose day-to-day existence even while they are working includes much free time. Parallel with these changes have come the changes in attitudes toward visually handicapped people. Unfilled time, once a problem for many blind people, is in much shorter supply today as more and more blind people assume jobs, raise families, and enter community life. While thus sharing in community responsibilities, however, blind people also have a right to expect full participation in the social and recreational activities of the community.

□ The establishment of a recreation program involving both sighted and blind persons, therefore, is important not only because blind people too require physical activity and social involvement with others, but also because such a program can greatly aid their fuller integration into regular community activities. One problem, however, which can arise is that although a visually handicapped person may want to participate in community life, he may not have the skills or tools necessary to do so. For true integration to take place, a great deal of education both of blind persons and of the community is necessary. The "classroom" in which this education can be achieved cannot be another sheltered activity, but rather a structured situation in which the whole community, including both blind and sighted individuals, can learn more about each other in an atmosphere of mutual enjoyment and relaxation.

To create such learning experiences, the Oregon Commission for the Blind, through its Volunteer Services programs, tries to involve an equal number of blind and sighted people in all such activities. Sighted persons are involved, not just as volunteers, but as participants. Self-help and the sharing of knowledge is stressed, while independence and leadership are promoted. Whenever possible, people are encouraged to get involved in other community activities as a group, in pairs, or as individuals. People learn to work together in a project or program and ultimately the visually handicapped members are absorbed into the general activities. Though this latter goal is often difficult to achieve, several successes have lent encouragement to these efforts.

□ Though many volunteer service groups have developed social and recrea-

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Preparing All Parties for Integration

Oregon Commission for the Blind

The Program in Eugene

tional activities, the program in Eugene is unique and has had some outstanding results. The Eugene Parks and Recreation Department was approached by the Commission for the Blind to assist in developing a community center recreation program for the visually handicapped residents in the area. Initially, very little was known by either staff or volunteers about recreational activities for blind people or about such a community-centered program, so it was a learning situation for everyone concerned.

Since its inception late in 1968, the activities of the community center have involved people of all ages, from children to senior citizens. Whatever the activity, the aim has been to involve families, friends, and any and every other person who would take an interest and lend a hand. The program has included such activities as family outings to the beach, to the mountains, to a special park; regular family nights at the community center; Halloween and Christmas parties; Thanksgiving potlucks; discussion groups; classes in braille, cooking, and dancing; cosmetology and drama workshops; and bowling, snow skiing, water skiing, fishing, canoeing, swimming, and much more. Much has been learned from each of these activities and each could be discussed at length. The emphasis in this paper, however, will be upon the two camping situations sponsored by the Eugene Parks and Recreation Department and held in the summers of 1969 and 1970. These camps are the culmination of the experience gained in other programs and they exemplify the most positive aspects of such a program.

□ The Clark Creek Camp, where about 22 campers from the program spend three days and two nights each summer, is part of an organizational tract operated by the Lowell Ranger District of the Willamette National Forest. The facilities of the campsite include three-sided Adirondack shelters with wooden platforms for bunks and an eating shelter with fireplace and grill stove for cooking. Sanitary facilities are in the woods some distance from the shelters. A cold water sink in the kitchen area and drinking taps provide the only running water. The site is in deep forest with two footbridges crossing a small creek that runs between the sleeping areas and the eating shelter. Dozens of paths wind through the virgin timber. An open meadow serves as a playing field, while a second, larger creek features a swimming hole and good fishing most of the time. On one side of the camp a mile-long nature trail winds up the ridge and joins there with other hiking trails. The area is set up for general use by community groups and has in no way been adapted for use by handicapped people.

The first summer that the area was used by the community center group, there was some concern about the many confusing paths and the hazards presented by the creek and the heavily wooded parts of the site. We planned, therefore, to string guide ropes along the routes that would be used most to alleviate some of the mobility problems and to insure safety. When we arrived the first day, however, it was found that the ropes had been accidentally left behind. Since there were a few more sighted campers than blind campers, it was decided that a one-to-one, initial orientation to the camping area would be conducted as a temporary alternative. Each pair of

Community center activities

Clark Creek Camp

Mobility at the campsite

campers spent a good deal of time exploring the area and working out the best routes from place to place. Within a few hours, several of the blind campers could travel between major points at the site without a sighted guide, demonstrating their skill by leading a blindfolded sighted person or another blind person along the route. By the time the ropes arrived the next day, there was clearly no need for them. With only one minor exception, there has never been a need for guide ropes to be used.

Having such a small group of campers, these outings have been characterized by a unique atmosphere of cooperation and sharing. Although the dozen or so sighted campers included staff from the Eugene Parks and Recreation Department and the Oregon Commission for the Blind, as well as volunteers, the terms "staff" and "volunteers" are misleading. Except for staff, all campers paid the same fee; all, including staff, were on an equal footing and shared in the work and responsibilities. When work was to be done, those available were asked to pitch in and help. There were no work assignments and when teaching situations arose, those with knowledge were encouraged to share it. This, as often as not, meant that a visually handicapped camper who had experience would teach first-time campers, both sighted and blind, some skill needed in outdoor living. When a problem or question came up, a camper had only to ask others for help or information.

□ A schedule of activities had been prepared, but the intention was not to use it unless it became necessary. The plan was to allow the campers to use their own initiative in starting an activity and in interesting others in joining them. Some difficulty was experienced in adjusting to this mode of operation, particularly for the recreation staff who were accustomed to the use of time tables. In a short time, however, the idea caught on and worked very well. At the end of the outing, it was found that all of the specific goals had been reached: everyone could build a fire, many had achieved independent mobility around the camp, all of the planned activities had been tried, and much knowledge had been exchanged. On occasion a camper needed to be reminded to include others or to encourage novices to try something new. If someone went fishing alone, it was suggested that next time he take someone along. When a fire needed to be built, a new camper would be encouraged to try it himself. At later camps those who had experience with this kind of arrangement were quick to set an example for the others.

An added benefit of relying on individual initiative and responsibility was the spontaneous development of a completely frank atmosphere. By stressing equality, self-reliance, and independence, no one did anything for anyone else that he could do or learn to do for himself. The problems of being visually handicapped were discussed openly and honestly, as were the problems of being sighted when something needed to be done in the middle of the night. Sleep shades were available and many sighted campers, out of a deep desire to understand their blind friends, tried various activities using them. Several group competitions were held in which the sighted people used sleep shades. In such instances, the totally blind campers usually had the advantage and delighted in outperforming their sighted friends.

Cooperative effort

Individual Initiative Emphasized

A completely frank atmosphere developed

For many, both blind and sighted, Clark Creek Camp was their first experience in outdoor living and much needed to be learned. For some, this was the first time they had been closely involved with a blind person or the first time they had really been alone in the sighted world. Each camper, therefore, had his own most memorable experience: shooting a bow and arrow, playing the guitar, seeing a mushroom growing from a log, swimming in an icy mountain stream, learning that they too were capable and could do many things on their own.

□ The two wilderness backpacking trips were equally as successful and even more exciting than the Clark Creek camping trips. Both took place at lake sites accessible only by a hiking trail and in unimproved areas. The first year a group of 14 campers went to South Mathieu Lake in Oregon's Three Sisters Wilderness area and a little over two miles from the end of the road. The second year the site was Rosary Lakes and the 21 campers had to hike three miles. These sites were selected by recreation staff who made the same considerations as they would for any beginning group of backpackers.

Again those attending were a mixed group of blind and sighted people ranging in age from the late teens to the late forties. Every person had to carry a pack containing his clothing, personal belongings, sleeping bag, and a share of the food. Some carried extra gear, such as tents, rubber boats, and the cooking pots. Most campers had packs weighing between 22 and 36 pounds, varying according to the person's size and experience.

Those present displayed a real variety of skills and abilities. Each year there were many blind and sighted first-timers, since backpacking is not a common activity, but there were also always a few skilled woodsmen along. The number of campers was kept low since a wilderness experience ceases to be a wilderness experience when there are too many people present.

A precamping session was a requirement for this trip. Everyone attending met at a community center the night before leaving to receive final instructions and to pack his gear. Each person was given some part of the food to carry and a system of trail buddies was set up. This session also provided an excellent opportunity for everyone to begin getting to know each other and to learn what could be expected in the next three days. The following morning, people were no longer strangers and mixing took place easily.

Since the trails were well-defined, it was not necessary to hike as a group. Though we all began at the same time, the pace of each pair was determined by their abilities. A visually handicapped and a sighted person were usually teamed together. Even though it was not necessary for a few partially sighted campers to use a sighted guide all of the time, it is still a good practice in the woods to be responsible for a companion and vice versa.

□ Mobility was handled somewhat differently than it might be in other situations. Since the backpacks and narrow trails often made use of the standard sighted guide technique difficult, each visually handicapped person used the method that suited him best. Some used a short heavy stick, a collapsed fishing pole, or a rubber boat paddle to increase the distance between themselves and the guide. Others preferred touching the back of the

Results

Wilderness Backpacking Trips

A varied group

Precamping session

Mobility Techniques on the Trail

guide's pack. This method improved freedom of movement and balance with little loss of information. Generally the hiking pace was steady and fairly fast. Stops were a result of physical exhaustion, never of sight problems, and as often as not it was the sighted partner who grew tired first.

For the most part, mobility was surprisingly easy, not only on the trail, but at the campsites where there were many confusing obstacles. We did find, however, that it was by far preferable to have more room to move around in than to pick too small a campsite, a mistake we made the first year. When people have their own tent, they have a fixed reference point—a sort of home base. From this starting point, they can use the fire, the lake, or the direction of the wind and sun to orient themselves. Birds with defined territories can even be used as points of reference.

Such a trip has its own very special meaning for any group of people. Being alone in a vast wilderness area tends to draw people more closely together. There is a great feeling of mutual dependence on and increased acceptance of those one might not seek out in another situation. Though it is impossible to become close to 21 people in such a short time, small groups did form and again the loose structure added to the freedom and diversity of activities.

At one lake, it was necessary to row across the lake, or hike around it, to a spring for drinking water, so there were always people out in the rubber boats or on a log raft. Others went fishing, hiking, rock climbing, rappelling down rock faces, picking huckleberries, or gathering wood, while others stayed in camp to tend to the cooking and housekeeping chores, or just to sit back and enjoy the fresh air, sunshine, and the "feel" of the wilderness.

These backpacking trips had the same positive qualities as the Clark Creek camps—the frankness, the development of mutual acceptance and self-confidence, the atmosphere of teaching and learning from others. Again no one person could try everything, so there was plenty of yarn swapping and exchanging of experiences. Everyone came away feeling that they had been a part of something unique. Even expert woodsmen said that nothing in their experience had ever equalled it. To some less oriented to the out-of-doors, it was probably the only time they would ever go backpacking. One girl commented, "I'm glad I went because, if I hadn't, I would always have wondered whether I could or not."

□ The point has now been reached in many areas of these recreation programs at which the community must begin to take over. Organized activities of this nature can only go so far. We may constantly stimulate the mixing of blind and sighted people, encourage their spontaneous integration outside the program, and provide educational experiences, but the time comes when the community at large must say, "Come on, we want you," for the townspeople to become involved individually, and for the activities to be taken out of the hands of the department and agency staff and returned to the grassroots. This final step is not easy, but as more and more is being done by concerned social agencies and local groups, perhaps it will become somewhat easier to accomplish in the future.

Orientation at the campsite

Activities

Evaluation

Conclusions

Comparative Methods in Teaching Cooking to the Congenitally vs. the Adventitiously Blind Adult

Many homemaking manuals have been written outlining practical teaching methods to be used with totally blind adults. The authors of these studies, however, rarely distinguish between congenitally blind persons, those who have never experienced visual imagery, and adventitiously blind persons, those who have lost their sight sometime during the maturing process. The abilities of these two groups differ vastly. In this paper I would like to discuss how the style of "retraining" or "rehabilitating" the adventitiously blind homemaker differs from the lengthy and intensive process of "habilitation" which many congenitally blind clients need to experience before they can safely and independently perform many cooking activities.

□ "Sight is the human sense which overcomes distance and at the same time, gives details and relationships of form, size, and position. This 'object quality' of vision permits more effective contact with and control of the environment than are achieved by the other senses. Therefore, lack of sight causes a detachment from the physical and, to a lesser degree, from the social, world."¹ This explains in part the multiple perceptual problems that affect many congenitally blind people and their conception of space, depth, direction, and size and shape relationships. Applying these observations to the teaching of cooking means that the approach must be very basic. The instructor may have to work patiently to help the student find the center of a frying pan. "Center," in this case, may have no meaning. The individual may have to learn size relationships, such as the meaning of cutting a sandwich in "half." On the other hand, the adventitiously blind person has had sight long enough to form such concepts. Loss of sight then means that she must rely on her remaining senses to relearn skills that she already knows. She must learn to judge what half of a sandwich is and to rely on tactual points of reference.

In teaching congenitally blind persons, abstract terms such as "a foot away," "half full," "to the right or left" should be avoided. Generally speaking, the teacher has best results if she tactually demonstrates every verbal step in an activity. In a simple operation like chopping celery, it is often necessary to let the student feel the proper position of the knife, the desired size of the celery pieces, and the mechanical movement of the knife. The same process taught to the adventitiously blind homemaker would only need limited instructions stressing certain safety rules about using the knife.

□ There are certain social and environmental differences in the backgrounds of our two groups of blind homemakers which greatly affect their readiness

This paper was originally prepared for a workshop entitled "Rehabilitation Techniques in Homemaking" held at Colorado State University in July 1970.

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Differences Between Two Kinds of Blindness

Differences in teaching

Fear and Anxiety

for rehabilitation training in cooking. In many cases congenitally blind persons come from overprotective, sheltering homes where the parents may have felt very guilty about their child's disability. It is not unusual for a child to grow up in this environment not knowing how to cut her own meat, to open a can of soup and heat it on the stove, or to make a sandwich for her school lunch. Such blind individuals have been especially protected from potential "danger" items in the kitchen, such as the stove and knives. Consequently, great anxiety may have been built up over a period of years centering on a fear of being burned or of being cut on a sharp object. These almost pathological fears need to be overcome through a program of patient, supportive training by the rehabilitation teacher. Many lessons may have to be conducted before the student will turn on the gas or electricity under an already centered saucepan, test the heat by placing her hand over the pan, and hold the handle to feel the vibration of the boiling liquid. Through experience I have found that it is not unusual to work with a single congenitally blind student for more than a year before he or she feels comfortable around cooking heat.

The adventitiously blind homemaker, for the most part, has had normal learning experiences in the kitchen and some exposure to food preparation before the onset of blindness. A sudden loss of vision will then bring with it a complex of insecurities and fears based on the individual's need to orient herself using her other senses. The method of teaching her to use the stove will consist of her learning to read oven and burner controls with raised, tactual markings, to center pans on the burners before turning on the heat, and to listen for and sense indications that food is boiling or frying. This orientation generally takes less time than the training of congenitally blind homemakers and involves less anxiety.

□ Much has been written about special cooking aids adapted for blind persons and catalogues are readily available for ordering such aids. It has been my experience that a wise selection of ordinary cooking equipment enables the adventitiously blind homemaker to function adequately in the kitchen. For instance, graduated measuring cups are more practical to use than those marked on the side. Many types of can openers are available but the most acceptable ones have a minimum of moving parts and are generally mechanically easy to handle. Baking dishes, mixing bowls, and measuring devices made of glass should be avoided because of their breakability. When considering the perceptual problems of many congenitally blind individuals, however, I have found several specially adapted aids that are particularly useful. Because of the anxiety of being burned, the locklid saucepan, which allows foods to be drained without removing the cover, has encouraged many fearful blind people to cook vegetables and macaroni products. The Magna Wonder Knife has an adjustable cutting guide which assures uniform slices of food. The perceptually handicapped blind person who has never learned to judge measurements finds this knife invaluable. Another area of difficulty in which I have found a real need for a special piece of equipment is turning meat in a frying pan. With an ordinary

Habilitation

**Ordinary vs. Specially Adapted
Cooking Aids**

Locklid saucepan

Grip turner

spatula it is difficult to know if the meat has really been turned over since it often slides off the utensil. The grip turner, a pair of tongs with wide surfaces, allows the individual to grip the food securely, rotate her wrist, and lay the food back in the pan with almost no spattering of fat.²

□ Many instructors have only a limited opportunity for evaluating a prospective candidate for rehabilitation training in cooking. It is, however, desirable to assess a blind individual's abilities as soon as possible so that the appropriate teaching level can be established. It is recommended that a brief intake interview be conducted to learn something about the person's social background, prior rehabilitation training, and her own evaluation of her capabilities in the kitchen. This should be followed by observing the individual's performance in some routine kitchen activities. I have selected making coffee, frying a hamburger, and making a tuna fish salad as three test activities which include almost every important cooking operation. The following competencies can then be assessed:

In making a pot of coffee in an electric percolator:

1. Ability to measure dry ingredients.
2. Ability to measure liquids.
3. Assembling the parts of the coffee pot.
4. Use of electric cord and outlet.
5. Pouring of hot liquids.
6. Carrying dishes to the table.
7. Ability to estimate small additions; in this case, cream and sugar.
8. General mobility patterns and sense of organization.

Evaluation of Prospective Students

Making coffee

In frying a hamburger:

1. Ability to estimate amount of meat necessary to make a patty.
2. Perception of size and shape in forming the patty to fit the roll.
3. Use of stove (ability to read tactual dials and to center pan on burner; whether or not there is any fear connected with the entire operation).
4. Ability to estimate when meat has started to cook and when it is browning (use of olfactory and auditory clues).
5. Ability to handle kitchen utensils (tongs or spatula) in turning meat and taking it out of the pan.
6. Placement of meat on roll can be a further indication of perceptual abilities.

Frying a hamburger

In making a tuna fish salad:

1. Use of knife in cutting celery (notice if celery pieces are of the appropriate size).
2. Use of can opener.
3. Ability to estimate amount of salad dressing (tactual feel of tuna fish mixture).
4. Ability to assemble ingredients and mix.

Making tuna fish salad

If, during the evaluation procedure, it is obvious that the individual is unable to perform because of fear, extremely hazardous techniques, or inability to comprehend the instructions, the evaluation will then of necessity become a teaching situation.

□ It was not my intention in this paper to outline concise steps for teach-

Summary

(Continued on page 154.)

Building Self-Confidence in the Multiply

Handicapped Blind Child

Soon after I began teaching a class of multiply handicapped blind children at the primary level, I became aware of a problem that almost every child had to some degree: a lack of confidence in themselves, a pervasive attitude of inadequacy and bewilderment. This lack of self-image was not just physically injurious, it also had a detrimental effect on their school work. Many were reluctant to attempt anything new in the classroom, choosing instead to go through a series of simple manipulative tasks, tasks which soon took on aspects of an absent-minded ritual. The children probably behaved in this manner because they preferred the security of successfully repeating very simple, previously learned tasks to the probable frustration and possible defeat that might be encountered in some new activity. They might try something once or twice when it was first introduced, but too often, if success was not almost immediate, they would quickly abandon the effort with an air of resignation.

□ I felt that if they could succeed in some new activity that they themselves regarded as worthwhile, the experience might reinforce their self-confidence and, in turn, give them enough emotional staying power to approach and succeed in new areas of school work. I considered several different activities and decided that we should produce a radio show.

My reason for selecting this activity stems from the fact that our communications media are given positive value by our society primarily because of the entertainment they provide. Most children have been exposed to a daily regimen of cartoons, westerns, soap operas, and commercials almost from the day they first came home from the hospital. Children soon learn that adults value these sources of noise and light. They give praise to radio and television characters, praise that the child hears and would like to receive for himself. Parents occasionally tell the child to be quiet, to smother his own very real needs and expressiveness, so that they can better hear the distant voices on a radio or television set. It is small wonder, then, that the communications media become important in the eyes of the child, and that most children, by the age of four years, have an impressive repertoire of melodies and slogans from various media commercials.

It seemed, therefore, that the children might find it very rewarding to take part in the production of an in-class radio show which would sound almost like the real thing. A class-produced radio show could do much to bolster faltering self-images because of its own positive image in the society in which the multiply handicapped child must grow and learn and live. All that is needed is a tape recorder, a short, five-minute script prepared by the teacher, and a phonograph for music.

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Producing an In-Class Radio Show

Media given positive value

Goals of project

□ The teacher can tailor the player's roles in the script to meet each child's abilities. A child who is verbally adept can handle relatively lengthy and complex sentences. Another may be able to remember his line only if it is restricted to less than four words. Each child can be challenged to remember and express his part, and still enjoy the satisfaction of executing it successfully. The children will be interested in hearing their own voices, but they also enjoy making and hearing raucous noises such as crashes, whistles, thumps, growls, and so on. So the order of the day is to write a script with an abundance of catastrophic sounds and bit parts for each child in the classroom. In this way, each child receives the full benefit of accomplishment in the show, regardless of his abilities.

Writing the Script

□ When the hour for the production has arrived, the class is seated in a semi-circle around the tape recorder. The teacher then reads a child's line to him, giving the reading the emotional tones it should have. The child repeats the sentence once for practice. Children are natural mimics and will usually adequately fill in the emotional tones required by the line. The teacher turns on the recorder and the child delivers his line into the microphone. As soon as he is finished, the recorder is shut off. The teacher moves to the student who has the next line and goes through the same steps.

Recording the Show

This procedure results in a tape with smooth conversation between the characters, just as if everyone had memorized all of their lines and delivered them on cue in a non-stop performance. Two sentences spoken 10 minutes apart by two different people will become one flowing stream of dialogue on a recorder that has been turned off between each sentence. It is this unique feature of the recorder that makes possible the production of a short radio show with a group of young multiply handicapped children who would easily become discouraged by the difficulty of memorizing an entire script.

No radio show is complete without music and sound effects. Music can emphasize drama, render a mood for a setting, enrich a climactic situation, bridge different settings, and introduce new situations. Phonograph records can supply the proper melodies, which can be fitted in between lines of dialogue by the stop-start method, or faded in and out of the background by simply turning the volume of the phonograph up or down.

Music

Sound effects give reality to the show and making them can also be very amusing to the children. Footsteps, doors shutting, heavy breathing, splashes, squeaks, growls, and disastrous crashes can easily be produced in the classroom. Footsteps, doors shutting, and heavy breathing can be produced by having the children stamp their feet, shut the classroom door loudly, and breathe directly into the microphone. By putting the microphone next to a glass which is being filled with water, you can easily simulate a pouring pitcher, a gurgling brook, or a waterfall. And nothing makes quite as splendid a crash as a box half filled with plastic and wooden toys being emptied out into a heap on the floor.

Sound effects

□ Through the use of a tape recorder and its stop-start feature, a class can produce a very authentic sounding radio program with dialogue, music, and sound effects following one another in a natural rhythm. Children with limit-

Conclusions

ed abilities can produce small shows and plays which they simply could not do if they were confined to the standard manner of production. The result is recognized by the multiply handicapped children and their normal peers as having entertainment value. The children were, in fact, delighted with their accomplishment and asked again and again to hear the tape of their radio show. The child's recognition of the socially approved worth of his efforts helps build a positive self-image in him and fortifies the self-confidence that is necessary if he is to venture openly into new learning situations and benefit from them.

Music: *Ten seconds for introduction. Fade out as narrator begins.*

Narrator: Good evening, ladies and gentlemen. Welcome to this week's exciting chapter of Heroes in Space. Tonight we find our brave heroes on the planet Boongah.

Music: *Dramatic for five seconds . . . then fades out. . .*

Sound effects: *Class makes a roaring sound to simulate the landing of a rocket.*

Colonel: Well, men, we are here.

Captain: Yes sir, we made it.

Smith: Let's get our suits on and go out and look around.

Captain: O.K.

Sound effects: *Two seconds of music followed by shuffles and grunts as 'suits' are*

pulled on. There is a small thump followed by . . .

Brown: Ouch! Boy, it sure is dark in here.

Colonel: Yes. Say, watch out for the door.

Captain: The door?

Colonel: I just opened it.

Jones: And it's a l-o-n-g way to the ground.

Hanson: Yes sir, and someone might fall out.

Captain: I guess you mean . . . YIPE!

Sound effects: *A long whistling sound and a noisy crash.*

Music: *Very dramatic and then fade out.*

Jones: Sarge, what was that noise?

Sarge: I think the Captain found the door.

Sample Script

Comparative Methods in Teaching Cooking—Continued from page 151.

ing cooking to the blind homemaker since many manuals are available on this subject. I have only tried to point out the differences between the two types of blind clients seen in rehabilitation programs and their respective potentials for learning to become independent homemakers in the area of cooking.

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2. The locklid saucepan and the Magna Wonder Knife are available from the American Foundation for the Blind (15 West 16th Street, New York, New York 10011). A catalog of aids and appliances, issued each year in inkprint and braille, is available on request. The grip turner is available from the Foley Manufacturing Company (3300 Northeast Fifth Street, Minneapolis, Minnesota 55418). This company also issues an equipment catalog.

References

The Optacon Reading Program

at the Monroe Public School

By early 1970, Stanford University and Stanford Research Institute (SRI) had developed a practical, portable model of the Optacon, a reading aid for the blind. This device allows a blind person to read ordinary print by sensing the letters tactually on a matrix of vibrating pins. The reader moves a small hand-held opto-electronic camera containing an array of 144 phototransistors over the printed letters. An image of each letter is then transformed electronically into a tactile image which can be felt on the tip of one finger placed on an array of 144 vibrating pins. The reader moves the camera across the line of print with one hand and feels the letters pass beneath the finger of the other hand at the same speed at which he moves the camera. The Optacon has been under development since 1962 when Dr. J. G. Linvill conceived the idea as a means of making ordinary print available to the blind. A detailed technical description of the Optacon has appeared elsewhere.¹

□ In the spring of 1970, the Stanford Research Institute staff learned that a nearby grade school had six totally blind students and a meeting was arranged with the resource teacher and the students to discuss the possibility of setting up a pilot field trial for the Optacon within the school. Two weeks later, following Easter vacation, the program was begun. SRI assumed responsibility for providing the personnel and equipment needed, and Monroe School supplied the facilities, a part of the resource room, and a tremendous amount of cooperation in assisting us.

In addition to the Optacon, three pieces of auxiliary equipment were used at Monroe School. First, there was a tracking aid, a simple clipboard-like device fitted with perpendicular sliding rods into which the reading aid probe can be plugged, to help the beginning reader to follow the line of print accurately. Second, a light box with 144 lights analogous to the 144 vibrating pins was constructed to allow a sighted person to see exactly what the reader is feeling on the tactile stimulator array of the Optacon. In other words, the pins which are vibrating in the shapes of letters on the Optacon are at the same time visible as an array of lights. The visual image is about 100 times the size of the tactual image. This, of course, enables the sighted teacher to tell the blind reader what letter he feels and to help the reader position the letter correctly on the stimulator array by manipulation of the camera. Third, the Optacon Training Aid, an electronic system which produces moving tactile images on the Optacon stimulator array from pre-recorded signals from

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Setting Up the Pilot Field Trial

Auxiliary equipment

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a magnetic tape recorder was used. This system was installed at the end of the first week and was used in this form for the first time at Monroe. The components of the system are a variable-speed Sony tape recorder, the conversion electronic package, and a normal Optacon minus its camera. With this arrangement, the text, in tactile form passes beneath the reader's finger on the stimulator array at a fixed rate of speed and he can give his full concentration to the task of sensing and interpreting the letters and words, without the bother of guiding the probe.

□ The six children involved in the program were eight years old (in the second grade), 10 (in the fourth grade), 11 (in the fifth grade), 12 (in the seventh grade), and 14 and 15 (both in the eighth grade). The records of the school indicated that all the children were of at least average intelligence and that there were no physical or mental factors inhibiting them from attending a public grade school. One student, whose blindness was the result of severe rheumatoid arthritis, had some permanent stiffness in his fingers which would affect the manner in which the Optacon camera was manipulated. Except for this and considering the fact that none of the staff available for the project from SRI had any teaching experience and the short preparation time for the curriculum materials to be used, these children offered no unusual problems which would have been difficult to handle. In short, the Monroe School and the children offered us a much desired opportunity for greater exposure of the Optacon to blind students.

It is important to point out that we, as the authors of the Monroe Project, wanted to prevent any child from suffering a sense of failure in association with learning to use the Optacon. We felt it was best to present this training program as something we were doing for our own edification, and that we were asking the children to help us with it. We tried to avoid the pressures associated with school classes, and I think we succeeded to a great extent.

□ There had been a considerable amount of speculation on our part regarding the best methods to employ when training the beginner in the use of the Optacon. Because of the unstructured and experimental nature of the processes by which other users had familiarized themselves with the Optacon, we had few documented or uniform precedents for the Monroe program. Our intense desire to obtain such training information led to our being receptive to all forms of input from the children. Through this flexibility and sensitivity, we hoped to find workable techniques. The first and what seems to be the most logical step was to teach single letter recognition.

This author planned to spend each morning at the school, and the children agreed to come in and use the Optacon for whatever time they were free from their normal schedules. After some juggling of schedules, we settled into daily 15- to 30-minute, individual sessions, and were able to continue this pattern throughout the remaining ten weeks of school. Some of the children already knew some of the letters, but a complete knowledge of the written alphabet was not conspicuous. We began, therefore, by sensing the letters and identifying them on the Optacon stimulator array. The shapes of the letters were learned by verbally describing the tactile sensation which the student

Characteristics of the Six Subjects

Milieu of the experiment

Flexible Approach

Scheduling and first contacts

felt, and we tried to make distinctions between these sensations so that the child could have a unique and identifiable impression for each letter. Sometimes drawing the letter on the child's hand helped him to appreciate the shape. The alphabet, upper and lower cases, was typed in order on a sheet of paper, followed by a group of random letters to complete the page. The child felt the letters passing beneath his finger as the trainer moved the camera controlling the speed of each letter to assure an optimum letter position on the stimulator array. Keeping in mind that a capital letter will fill the array, it is important to place the lower case letters well so that the relative positions of ascenders and descenders will be apparent to the student. Also, it was important to explain that a moving camera produces a clearer image, while holding it stationary on one letter seems to diffuse the image after a short time.

There are two other critical aspects of letter recognition. It is necessary to identify each letter as a separate entity, unattached physically to its neighboring letters. Secondly, the reader must appreciate that the letter is being exposed column by column as the next letter appears. It seems absolutely necessary to be able to tell whether one has the entire letter or only part of it on the array before one can go on with reading words and text successfully. This recognition task involves knowing that the camera is well placed on the letter both horizontally and vertically. At first the trainer controls the camera, but soon the child must assume that part of the reading operation. The sooner the child takes full control of the equipment the better, for as the task becomes simpler, he can control his own tactile input in both time and space.

□ To maintain the student's interest in the ultimate goal of actual reading, we moved from letters to words as quickly as possible, even if the entire alphabet had not been mastered. Thereupon, we began using some exercises emphasizing letters according to their frequency of appearance in English. These exercises contained short words, phrases, and sentences and were soon supplemented with other exercises stressing common letter groups. Emphasis was placed upon getting the child to attempt to learn these letter groups (i.e., *and*, *ing*) as soon as possible in order to make word reading smoother. It is at this point that the ability to use language comes into play. The repetitive and logical aspects of English can be used to aid the student in increasing his fluency in reading with the Optacon. Familiarity with such things as prefixes and suffixes and knowledge of the structure of English as a language help the child to go beyond letter-by-letter reading. The Optacon Training Aid was used intermittently throughout these sessions to present single letters, then words, and finally, short sentences. The tapes were arranged to repeat every letter, word, or sentence several times. In this way, the child had an opportunity to absorb and remember what he needed to help him in identifying the presentation. Again, our philosophy, in using the tape system, of presenting a series of letters, words, or even sentences to the child, eliminating concern with positioning the letter correctly and, therefore, forcing him to accept the tactile images at a uniform speed will hopefully increase his rate of identification and promote the assumptive use of language.

The second plateau is reached when the student is able to read words, either

Letter recognition

From Letters to Words

The second plateau

letter by letter or whole words (that is, without verbalizing the letters). It is necessary at this point for the student to read text of some kind to give him the satisfaction of really reading something. He may not always recognize each letter immediately, but he is able to put words together. The children were told to try to anticipate words or segments of words within the context of sentences so the reading process could proceed more smoothly, and so they could begin to use intellectual processes for comprehension and identification rather than the letter-by-letter assembly of words. Although we encouraged them to guess at or pass over unrecognized letters (on the premise that these unknowns would become apparent from context), most of the children felt reluctant about doing this.

We also tried to stress the advantages of reading letter groups or syllables rather than painstaking identification of each letter. This process of intellectually coding groups of letters, such as *tion*, or entire words like "and" as one tactile sensation is, I believe, the means by which the Optacon user is able to read fluently. This means substituting mental processes for braille contractions, a learning function which is developed during the mastering of the Optacon reading skill. Those who are already reading fluently will testify to the use of this kind of "speed reading" technique, even though it is accomplished unconsciously. I feel that two of the children at Monroe reached this level of language processing, while one other child demonstrated this ability but with less consistency.

□ There appeared to be three categories of accomplishment in Optacon reading among the six students. Two had obviously mastered the task of learning to read with the Optacon. One child had 20.5 hours of training, the other 21.5 hours. They mastered letter recognition on the Optacon array after just a few hours and moved on very quickly to reading words in text. Then their learning reached a plateau. Although their reading skill was good, there was some variability in their day-to-day reading performance. This seemed to be due partly to the lack of a real life reading situation, i.e., using one's own Optacon to practice reading and to discover skills needed to read rapidly and effortlessly. One of these two children was given an Optacon to use at home for about one month prior to the end of the school term. We encouraged her to read anything she desired and to spend as much time as she wished using the device. Our aims were 1) to stimulate her use of the Optacon by allowing her the freedom of choosing materials and 2) to ascertain, if possible, what the role of the Optacon would be in her daily life. After one month's trial it was clear, based upon her statements, that she would like to have an Optacon for personal use. There was no noticeable increase in her reading speed (based on casual observations), but I do not think it would have been realistic to have expected that. I think one obvious drawback to this trial was the one month's restriction on the availability of the Optacon to the student. This may have discouraged her from beginning to read material which she knew could not be completed. A more favorable plan, I believe, would be for each child to have an Optacon assigned to him for the duration of the program, allowing the possibility for the child to use it at home as well as at school.

"Speed reading"

Three Categories of Accomplishment

Use of Optacon at home

In the second category there were three children who also mastered the task of letter recognition and proceeded on to text reading, but who required a longer initial stage and more frequent reviews than the two children in the first category. Their proficiency in dealing with text was also not as proficient, and they tended to have much greater day-to-day variability in the quality of their performance. The language skills were not so readily perceived or remembered, and this may very well have slowed their reading progress. The amount of time spent with each child may also have had some effect on the progress made. Of these three, the child who was nearest to good reading skill had had 18.5 hours of direct assistance; the others had had only about 10 hours of help. We were unable to increase the length of their Optacon learning sessions because of school schedules, but a longer field trial might have resolved this more equitably.

Second category

The one child in the third category, and the youngest of the group, learned to recognize letters and even words, but his actual reading of text separates him from the others. The difficulty of the task may have been overwhelming as he may not have had the time to develop the mental skills necessary for Optacon reading.

Third category

□ During the fourth week of the program a letter recognition test was given in the hope of making some evaluation of the skill achieved in letter learning. The test consisted of two parts: first, the capital letters arranged at random and, second, the lower case letters also at random. These letters were typed on an IBM typewriter with a rather common type face called "Diplomat." Three blank spaces were left between letters to allow room for centering the letter easily. The children were told to read across the line of letters and to identify each letter. No time limit was imposed and no indications were given to the child as to whether the response was right or wrong. There was no feedback because the alphabet appeared only once (this was done to avoid making the test too long, and to prevent the child from trying to guess letters through the process of elimination).

Letter Recognition Test

At the end of May, we administered another test, one made up of upper case letters, lower case letters, and words (a total of 91) randomly typed using the IBM Diplomat type face and with five blank spaces between adjacent letters or words. The instructions were the same: identify the letter or word when ready, no time limit, no reinforcement. It was not possible to complete the entire test in one day and it was, therefore, continued for two to four days depending on the child. The second grader did not participate in this test.

Letter and word test

The first test was given after five to six hours of training and the second after about 10 additional hours of training. The results, presented in Table 1, show that the overall correct performance for the first test was 46 percent, with 52 percent of the lower case letters identified correctly and 40 percent of the upper case letters. The second test, which included words, shows a very definite improvement in letter identification and an even higher percentage for correct word identification. The overall correct letter identification in Test No. 2 was 69.5 percent, with 74 percent correct for lower case letters and 65 percent correct for upper case. Both tests showed a better ability to identify

Results of the first test

Results of the second test

Test No. 1

TABLE 1

<i>Student</i>	<i>Percent Lower Case Letters Correct</i>	<i>Percent Upper Case Letters Correct</i>	<i>Percent Overall Correct</i>
No. 1	92	100	96
No. 2	57	45	51
No. 3	57	30	43.5
No. 4	45	15	30
No. 5	34	19	26.5
No. 6	26	30	28
Group Average	52	40	46

Test No. 2

<i>Student</i>	<i>Percent Lower Case Letters Correct</i>	<i>Percent Upper Case Letters Correct</i>	<i>Percent Upper & Lower Case Letters Correct</i>	<i>Percent Words Correct</i>	<i>Percent Letters & Words Correct</i>
No. 1	92	88	90	95	92.5
No. 2	92	76	84	92	88
No. 3	66	53	59.5	72	66
No. 4	64	60	62	65	63.5
No. 5	56	48	52	60	56
Group Average	74	65	69.5	77	73

lower case letters when they are isolated than upper case. In Test No. 2, the overall percentage of words and letters correct was 73 percent; this is slightly higher than single letter identification scores. The category of words only that were correctly identified scored the highest at 77 percent, showing that words were being read more easily than single letters. The scores of individual children in both tests range from above 90 percent correct to a low of about 26 percent correct. The individual scores correlated rather well with the child's observed reading proficiency. This is rather a hopeful note when one considers that, even though some students take a longer time to learn quick and easy letter recognition, we might expect the reward of more fluent reading to automatically accompany that skill. This may be the question of the chicken and the egg, however, and until we can gather more substantial data from Optacon learning experiences, we cannot even guess the outcome of letter learning vs. word learning as a beginning technique. For example, if we would bypass individual letter exercises and go directly to words, we might reap the benefits of developing the cognitive processes through which words are recognized without each letter being recognized and thereby get to fluent reading more quickly. This is assuming that letter recognition is a by-product and will improve along with word reading skill.

□ While there has been much stress on the Optacon reading rates of adults, I do not believe these are an important criterion for judging the performance

Letter learning vs. word learning

Reading Rates

of elementary school children. For one thing, the child's short attention span makes it difficult for them to sustain concentrated reading for a period long enough to produce a valid measurement. Also, we did not want to produce the kind of pressure and anxiety that this kind of testing might engender. However, in order to get some idea of their speed we measured the reading rates of the two best students without their knowing that such measurement was being made. The results were reading rates of between six and eight words per minute after about 20 hours of training. While this is slow reading, it is very respectable for the short amount of Optacon training time involved. Also, within each of these tests, there were spurts of much more rapid reading.

Another consideration important in teaching the use of the Optacon, and one which could be tested at Monroe School, was the age of the learner when beginning Optacon training. Prior to the Monroe program, we knew of five accomplished Optacon readers: three Stanford students, one SRI programmer, and one seventh grader in Palo Alto, all of whom had an Optacon for personal use. We had had brief contacts in the laboratory with four non-students, ranging from 27 to 45 years of age, who had achieved no real reading success during the time we could expend on training. We were not able to arrange for additional training with this non-student group, and the contacts were discontinued. Monroe School, therefore, offered the first opportunity for young children to interact with the Optacon and the first chance to test the Optacon Training Aid. The ages of the children, as one might expect, did not necessarily correlate with the degree of reading proficiency as assessed at the end of the school year. The 10- and 12-year-olds became the most fluent readers, while the eighth grade students were using the Optacon with less facility than the 10-year-old fourth grader and the 12-year-old seventh grader. The fifth grader, age 11, and the second grader, age eight, were the poorest in Optacon reading. I don't think it would be unrealistic to consider the possibility that at the age of eight one may not have enough reading skills to undertake the additional learning required to use the Optacon. Other things might compensate or override reading and language deficiencies, such as motivation, ability to think abstractly, good concentration, etc., but we would need to investigate these variables with many more children before considering their implications for theory.

□ Throughout the ten weeks at Monroe we encouraged the children to bring with them anything they wanted to read. We felt that in this way we could tap the child's interests and avoid certain drawbacks of using only assigned material. We hoped, also, that this might provide clues for the future selection of materials to be available for use in Optacon training. There was an initial problem with a tendency for the children to choose material much too difficult for their degree of Optacon reading ability. In an effort to circumvent this, I began to gather books and stories from friends' children, book stores, magazines, etc., which I thought might be of interest.

For the most part, a child would settle on something to read and continue with it after having tried several other things. Future programs would profit from a carefully chosen array of material reflecting a knowledge of the ob-

Age of the learner

Selection of Reading Materials

Criteria for selection

served difficulties, vocabulary restrictions, and general interests, in addition to allowing the option of material being chosen by the individual child. I feel that the kind of material used is of critical importance and each child's unique requirements should be recognized. Relevant studies could be conducted during field training programs to find a means for selecting material as well as for evaluating the importance of this factor in the ability to learn to read with the Optacon. We might, perhaps, take this opportunity to present something that would be of value to the child, such as useful skills or cultural enrichment.

□ The program at Monroe has led us to consider very seriously the role of motivation in Optacon reading. By motivation we mean the desire on the child's part to learn to use the Optacon accompanied by a noticeable effort during the sessions to achieve good reading skill. We wanted to assess the relationship of Optacon reading progress with our judgements of motivation. We used several indicators of each child's motivation to use the Optacon. First of all, we attempted to make participation in the program voluntary and to sanction withdrawal from it at any time (although none chose to withdraw from the program). Secondly, we noticed the eagerness with which the child attended the reading sessions. And, most importantly, we noted the comments of the child during the reading time as he used the Optacon. It seemed to us that there was a connection between the degree of motivation and the progress made toward good reading skill. We cannot attempt to explain a lack of motivation or to judge whether or not this lack is an attitude unique to the Optacon or one that might be characteristic of the child's school experience. I think it is valid, based upon my daily contact with each child, to say that there is another aspect of this learning experiment to consider: The nature of childhood itself, with its limited attention span, boredom with things not always fun, and the inability to foresee the uses of the Optacon as a tool. It seems to me that greater interest may be engendered through what is presented.

□ I would like to report here some of my reflections, taken randomly from notes made during the 10 weeks with the Monroe children, that reveal our perspective in the program. 1) "The day-to-day variability of each child has come as a great surprise and something not encountered to this degree with other Optacon users." 2) "Perhaps the task of using the Optacon is analogous to reading itself—if you are motivated to read either because of intellectual need or means of livelihood, you are motivated to use the Optacon as a tool for this." 3) "With the children at Monroe, I do not feel that words per minute of Optacon reading is a valid concern. I think now the authentic question is, 'Can they read?'"

The Monroe experimental project left me convinced that all children are capable of using the Optacon for access to the world of print, and, if some do not achieve that capability, the fault may lie somewhere in the prescribed structure for teaching the use of the Optacon.

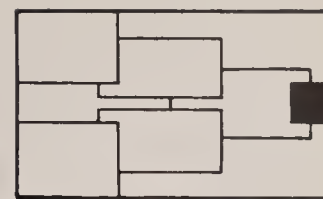
1. Brugler, J. S.; Meindl, J. D.; Plummer, J. D.; Salisbury, P. J.; and Young, W. T. "Integrated Electronics for a Reading Aid for the Blind." *IEEE Journal of Solid-State Circuits* SC-4(1969):304-12.

The Importance of Motivation

The nature of childhood

Reflections and Conclusions

Reference



Robert L. Robinson, the author of the following guest editorial, is a research associate in the Research Department, American Foundation for the Blind.

Science, technology, and the ever-growing need for more sophisticated and precise sensory aids for the blind have together contributed in recent years to the dramatic development of many such aids. Some of these are still in the early experimental stage or just off the drawing board, while a few others will soon be available.

Among the most promising of the soon-to-be-available aids are the ultra-sonic spectacles developed by Dr. Leslie Kay, dean of the College of Electrical Engineering, University of Canterbury, Christchurch, New Zealand. This aid, the result of 10 years of research, is not itself a mobility device, but is intended for use with other aids, such as the long cane or dog guide; it allows a blind user to know somewhat more about his environment than he could know by using only the cane or a dog. In short, the spectacles provide certain information which the blind traveler would not otherwise have unless he were accompanied by a sighted person.

In appearance, the spectacles are modified eye glasses, somewhat larger than most, with three transducers (each the size of a one-cent piece) located at the nosepiece between the two lenses. A high-frequency sonic pulse is emitted from the center transducer which, when it strikes an object, produces a sonic echo that is received by the other two transducers as vibrations (similar to the action in the diaphragm of a telephone

receiver). The control pack converts this vibration to sound which is fed through tubes built into the temple bars of the spectacle frames to a minute speaker—similar to a hearing aid—mounted over the ear. Since these signals are transmitted binaurally, that is, to each ear, and since each set of signals may differ in pitch, the user receives information not only about the distance of objects in front of him, but also additional information about their direction. Loudness indicates the texture of the surface that is reflecting the ultra-sonic pulses. For example, the smooth surface of an automobile would produce an intensity of sound that would be quite different from that produced by a brick wall. The ambient sounds of the environment, such as that produced by traffic, are quite useful and are still available to the blind traveler who is using the ultra-sonic spectacles.

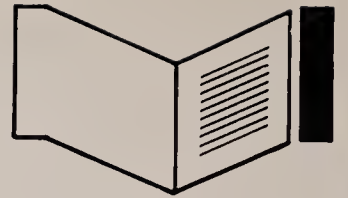
In designing this aid, Dr. Kay has carefully attended to the personal aspects of its use. The aid is not restricted to any size, color, or type of frame. The power supply (a rechargeable battery) and simple controls are contained in a small pack that can be clipped to the belt. The cost of the spectacles has not yet been determined and will vary from country to country. (The plan at present is to include the cost in the overall charge for the mobility training with long cane or dog guide.)

It must be emphasized that training is an integral part of the research-demonstration effort to determine if the Kay ultra-sonic binaural spectacles can facilitate and enhance independent travel by blind persons. The interpretation of the sounds produced by the aid requires

an intensive training period and it is understood that the aid will be issued only to those who have received such training from qualified instructors. Boston College, with a \$99,000 grant from the Seeing Eye, Inc., began a field research program early this year under the direction of Dr. Kay. The program involves training qualified mobility instructors who will, in turn, give instruction to 200 blind persons between 16 and 55 years of age. This research is being carried out at cooperating rehabilitation centers for the blind in Arkansas, Kentucky, Illinois, and Michigan, and at the rehabilitation centers for the blind of the U.S. Veterans Administration. A similar program was also begun last year at the National Guide Dog Training Centre in Kew, Victoria, Australia.

It is hoped that the body of knowledge developed through this research will indicate whether or not the ultra-sonic spectacles, or something similar to them, can become a really useful travel aid to the independent blind traveler who uses either the long cane or a dog guide. As of now, we simply do not know. We eagerly await the reports that will in due time be generated as a result of these demonstration projects. It is clear, however, that if the aid is shown to be useful, a whole new breed of peripatologists must evolve to provide the proper training.

For the blind independent traveler, it is exceedingly important to locate and identify objects in his environment. Modern technology should be able to help him encounter even more of that environment. This writer believes that the Kay ultra-sonic spectacles may be a breakthrough in that direction.



The Psychoanalytic Study of the Child. Vol. 25 (an annual), International Universities Press, Inc. (239 Park Avenue South, New York, N.Y. 10003), 1970. 543 p. \$12.00. Contains one article concerning blindness, "Vulnerable Periods in the Early Development of Blind Children," by Doris M. Wills, pp. 461-80.

St. Raphael's Geriatric Adjustment Center for the Blind and Visually Handicapped, by James J. Acton. *The Seer* (Pennsylvania Association for the Blind, 2843 North Front Street, Harrisburg, Pa. 17110), Vol. 41, No. 4, Winter 1970-71, pp. 22-24. Brief story of the five-year-old Center in Newton, Mass., which offers one of the few programs designed especially for elderly blind persons.

Art for the Sighted and the Blind, by Frank Labaw. *The Seer* (see address above), Vol. 41, No. 4, Winter 1970-71, pp. 8-12. Report on a special exhibit held last spring at the Lackawanna Branch of the Pennsylvania Association for the Blind in Scranton. Most of the 21 pieces of small sculpture were on loan from the Everhart Museum.

What's New at G.B.U.? by Donald W. Rapp. *The Long Cane News* (Institute of Blind Rehabilitation, Western Michigan University, Kalamazoo, Mich. 49001), Vol. 4, No. 2, April 1970, pp. 15-18. Brief outline of the program at the Greene Blind Unit of the Walter E. Fernald State School (for the mentally retarded) in Waltham, Mass.

The Partially Sighted Client, by Hugo R. Vigoroso. *The Long Cane News* (see address above), Vol. 4, No. 2, April 1970, pp. 4-9. The author, a graduate lecturer at Boston College, discusses the areas of visual functioning which a peripatologist needs to understand in order to work successfully with partially sighted people.

Progress of the Midlands Mobility Center in Birmingham, England, by Robert Crouse. *The Long Cane News* (see address above), Vol. 4, No. 3, January 1971, pp. 23-27. A report on the second year (1967-68) of the Midlands Mobility Center and the increasing popularity of the use of the long cane.

Sailing Blind, by John Watney. *The New Beacon* (Royal National Institute for the Blind, 224 Great Portland Street, London W1N 6AA, England), Vol. 54, No. 644, December 1970, pp. 311-15. An article reprinted from the *Sunday Times Magazine* of August 30, 1970, relating the experiences of Harold Hayes, blind for 20 years, who took up coastal cruising as a hobby several years ago.

Substitutes for Sight. *MD Medical News-magazine* (MD Publications, Inc., 30 East 60th Street, New York, N.Y. 10022), Vol. 14 No. 12, December 1970, pp. 49-51. Brief discussion of research in progress and technical innovations in braille production, reading machines, mobility devices, and visual substitution systems.

Principles and Practices of Teaching the Deaf-Blind, by Rowena E. Mitchell. *The Chronicle* (New Zealand Foundation for the Blind, Private Bag, Newmarket, Auckland, New Zealand), Vol. 1, No. 57, December 1970, pp. 7-10. The author has based her article on the experiences of two years spent teaching deaf-blind children at the Deaf Blind Unit, Homai College, New Zealand. —M.M.R.

Additional Listings

The proceedings of the low vision conference held in San Francisco on November 29-December 1, 1970, are available from Loyal E. Apple, Low Vision Conference Chairman, Veterans Administra-

tion Hospital, 3801 Miranda Avenue, Palo Alto, California 94304. The conference, funded by the U.S. Office of Education and attended by optometrists, ophthalmologists, educators, perceptual psychologists, and rehabilitation specialists, included discussions of the application of recent research to the education and habilitation of persons with low levels of residual vision.

Basic Components of Orientation and Movement Techniques: A Guide for the Rehabilitation Teacher (inkprint \$1.00) and **The Anatomy and Physiology of the Human Eye** (braille, \$1.50) are available from the Institute of Blind Rehabilitation, Western Michigan University, Kalamazoo, Michigan 49001.

24 Selected Articles (128p., \$1.50), a compilation from recent issues of *The Teacher of the Blind*, includes discussions of many aspects of the development of visually handicapped children and adolescents, contemporary education, and welfare, from College of Teachers of the Blind, Royal School for the Blind, Church Road North, Wavertree, Liverpool L15 6TQ, England.

Educational materials prepared at the Elwyn Educational Materials Center (Elwyn Institute, Elwyn, Pa. 19063) for use by special education teachers, vocational counselors, and others in the field include the three-volume **Community Guide Workbook** (\$1.50 per volume). This guide covers all aspects of independent community living, from employment, money management, and social security to driving a car, legal and medical emergencies, etc. Other books deal with a variety of subjects, such as, **Aquatic Lessons for Exceptional Children** (\$1.50) and **Elwyn Comprehensive Curriculum for the Educable Mentally Retarded** (\$4.75). Complete listings are available on request from the Center



■ A new film, *For Blind Children of the World*, was recently released by the Helen Keller World Crusade (22 West 17th Street, New York, N.Y. 10011). Narrated by Alexander Scourby, this 12-minute, color film is a world tour of educational programs for blind children. Schools in Holland, Thailand, Ceylon, and Taiwan are featured along with historical footage of Helen Keller visiting schools overseas. The film is available without cost to clubs and community groups.

■ According to the Center for Disease Control, the rubella immunization campaign is beginning to show results. In the first three weeks of 1971, there were 1,347 rubella cases, down from 2,285 during the same period last year. Also, the number of cases in 1970—when public health officials expected another epidemic—was 55,111, compared to 55,176 in 1969. The Center reports that about 21 million rubella shots were given in 1970 and that four out of every 10 children in the United States are now immunized.

■ The National Public Relations Council of Health and Welfare Services is sponsoring a national public relations institute on June 2-4, 1971, in New York City, on the theme of directions for decision-making about the communications media and about social changes that affect the policies of social and health organizations.

Topics to be discussed in the general sessions will include social issues and the media; analysis of public service television spots; changing life styles; how to communicate with young people; and the question "Is public relations changing?" The 1971 institute will have continuous workshop sessions so that all participants will be able to attend each session rather than selecting only a few and missing others. Among the subjects to be discussed in the workshops are audio-

visual methods; public relations budgeting; cable television; developing television spots; emerging social agencies; sensory communications; and making graphics and printing work together.

A copy of the 1971 institute schedule and registration form is available from the National Public Relations Council, 419 Park Avenue South, New York, N.Y. 10016.

■ A \$2.5-million grant to build the Nation's first training and research center for deaf-blind people, plus an award of 25 acres of surplus government property, were announced in February by the U.S. Department of Health, Education, and Welfare. According to John D. Twiname, administrator of HEW's Social and Rehabilitation Service, the funds will support the construction of a new National Center for Deaf-Blind Youths and Adults, which will be operated by the Industrial Home for the Blind under an agreement with SRS.

The tract of land, located at Sands Point, Long Island, New York, was transferred to the Industrial Home for the Blind and is to be used to develop the new National Center. Since 1969, IHB has operated a center for deaf-blind persons in temporary facilities at New Hyde Park, New York.

■ The International Conference of Educators of Blind Youth is to be held August 22-27, 1971, at the Perkins School for the Blind, Watertown, Massachusetts. According to the tentative program, the following topics specifically related to deaf-blind children will be covered by the conference: on August 23, verbal children, pre-verbal children, non-verbal children, implications of teaching a mother tongue, learning disabilities; on August 24, demonstration of diagnosis and evaluation, description of European programs; on August 25, social prob-

lems, parent counseling, aftercare, report from the National Center for Deaf-Blind Children; on August 26, medical therapy, behavior modification, sexual problems, international planning, training of personnel.

For further information or to register for the conference, write to Dr. Edward J. Waterhouse, Director, Perkins School for the Blind, Watertown, Massachusetts 02172.

■ Visually Impaired Data Processors International has extended an invitation to all those interested in the advancement of blind persons in the computer field to become members. There are three classes of membership: Individual (visually handicapped persons working or looking for work in the computer field, \$10); Organizational (companies employing or interested in employing visually handicapped data processors, \$10); Associate (persons interested in the field of visually handicapped data processing, \$5). Membership applications should be sent to Richard J. Snipas, Treasurer, VIDPI, 166 South Bay Avenue, Freeport, New York 11520.

■ "The Care of Old People—Designing the Humane Environment" will be the theme of the Institute of Gerontology's 24th Annual Conference on Aging, to be held June 7-9, 1971, at the University of Michigan in Ann Arbor. The topics to be discussed during the three-day session include the roles of nursing homes, homes for the aged, and mental institutions; legal problems facing people in their old age; the priority issues confronting public and private organizations; and responsibility for developing the humane environment.

For further information write to Woodrow W. Hunter, Conference Co-Director, Institute of Gerontology, 1021 East Huron Street, Ann Arbor, Michigan 48104.

■ On May 20, 1971, the Helen Keller Memorial Park will be dedicated by the Alabama Lions at Ivey Green, Tuscumbia, Alabama, the birthplace of Miss Keller. Lions International President Dr. Robert D. McCullough will be the keynote speaker. Sight conservation and work for the blind became one the Lions' major world-wide activities as a result of an appeal made by Miss Keller at the Lions International Convention in 1925.

■ The National Health Council, through its Committee on Continuing Education will sponsor 10 short courses in 1971 for personnel of official, professional, and voluntary health agencies and organizations. The course subjects will include comprehensive health planning, consultation skills, dynamics of the community, trends in community health care, executive development, leadership development, and the health agency in the community.

The 10 courses will be conducted on various dates from May through August 1971 by Columbia University, Indiana University, University of California, University of Michigan, University of Oklahoma, and Washington University. Descriptive brochures and other information on these courses may be obtained by writing to the National Health Council, 1740 Broadway, New York, N.Y. 10019.

■ The new Telephone Reassurance Program of the Westchester Lighthouse for the Blind, White Plains, New York, is scheduled to begin operation sometime this spring. The program is a free service offered by the blind members and volunteers of the agency's Recreation Department to homebound persons who live alone and would like the reassurance of a daily telephone call. Calls are made at a specified time and, if there is no answer, help can be sent.

Appointments

■ National Advisory Eye Council, National Eye Institute, new member: **Reynaldo J. Carreon, Jr., M.D.**, director, Pan American Medical Eye Group, Los Angeles.

■ National Center for Deaf-Blind Youths and Adults, New Hyde Park, New York: **Harry J. Spar**, associate director.

■ Industrial Home for the Blind, Brooklyn: **Elizabeth Maloney**, assistant executive director for services; **Edward J. Leber**, social service director.

■ Regional libraries for the blind and physically handicapped, new head librarians: Faribault, Minnesota, **Maurice Gettys**; St. Louis, Missouri, **Walter Smith**; Trenton, New Jersey, **Steve Herman**; New York, New York, **Don Allyn** (acting).

■ Arkansas Enterprises for the Blind, Little Rock: **James W. ("Jay") Owens**, psycho-social counseling staff.

■ Area Centers for Services to Deaf-Blind Children, Dallas, Texas: **Mrs. Johnnie B. Daniel**, Louisiana coordinator, Baton Rouge.

Coming Events

May 1 National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, Annual Meeting, Fort Lauderdale, Florida.

May 2-6 National Industries for the Blind, Spring Workshop, Fort Lauderdale, Florida.

May 9-12 International Association of Rehabilitation Facilities, Las Vegas.

May 16-21 National Conference on Social Welfare, 98th Annual Forum, Dallas.

May 17-20 National Braille Association, 11th National Conference, Chicago.

May 24-26 American Ophthalmological Society, Annual Meeting, Hot Springs, Virginia.

June 6-10 Special Libraries Association, San Francisco.

June 7-9 24th Annual Conference on Aging, Institute of Gerontology, University of Michigan, Ann Arbor.

June 20-24 American Medical Association, Annual Convention, Atlantic City, New Jersey.

June 20-26 American Library Association, Annual Convention, Dallas.

June 22-23 American Diabetes Association, 31st Annual Meeting, San Francisco.

June 23-26 American Optometric Association, 74th Annual Congress, Houston.

June 27-July 2 American Physical Therapy Association, Annual Conference, Boston.

June 27-July 2 National Education Association, Annual Convention, Detroit.

July 18-21 American Association of Workers for the Blind, Biennial Meeting, Richmond, Virginia.

July 25-30 International Association of Applied Psychology, 17th International Congress, Liege, Belgium.

August 4-8 Blinded Veterans Association, 26th National Convention, Miami Beach

August 22-27 International Conference of Educators of Blind Youth, Perkins School for the Blind, Watertown, Massachusetts.

August 23-26 American Hospital Association, Annual Convention, Chicago.

October 11-13 National Rehabilitation Association, Annual Conference, Chicago.

October 12-13 American Association for World Health, 19th Annual Meeting, Minneapolis.

October 25-29 50th Anniversary Celebration, American Foundation for the Blind, New York City.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

Sensi-Quik

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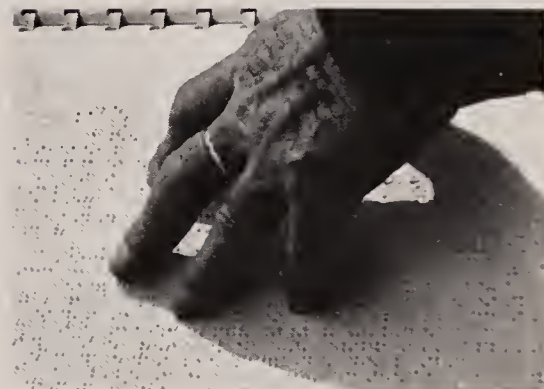
Sensi-Quik's shaft is made of large diameter, tapered tubular fiber-glass with gleaming white pebble finish, and has a bright red band at its tip. The smart-looking contour handle is of black vinyl. The 1/2-inch diameter, diamond-hard, tungsten-carbide working tip resists wear, and produces sharp, useful touch information. The cane is put together with epoxy, as fiber-glass golf clubs are, to withstand repeated sudden impacts.

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Canes are made on individual order in any length from 34 to 60 inches.

Developed and distributed by the Go-Sees, a non-profit corporation, Sensi-Quik canes are not sold. They are supplied to anyone who joins the Go-Sees and pays a membership fee of \$5. They are also available through agencies to individual trainees at a reduced rate of \$4 (they must be ordered in even-inch lengths).

Persons or agencies interested in the Sensi-Quik cane are invited to contact

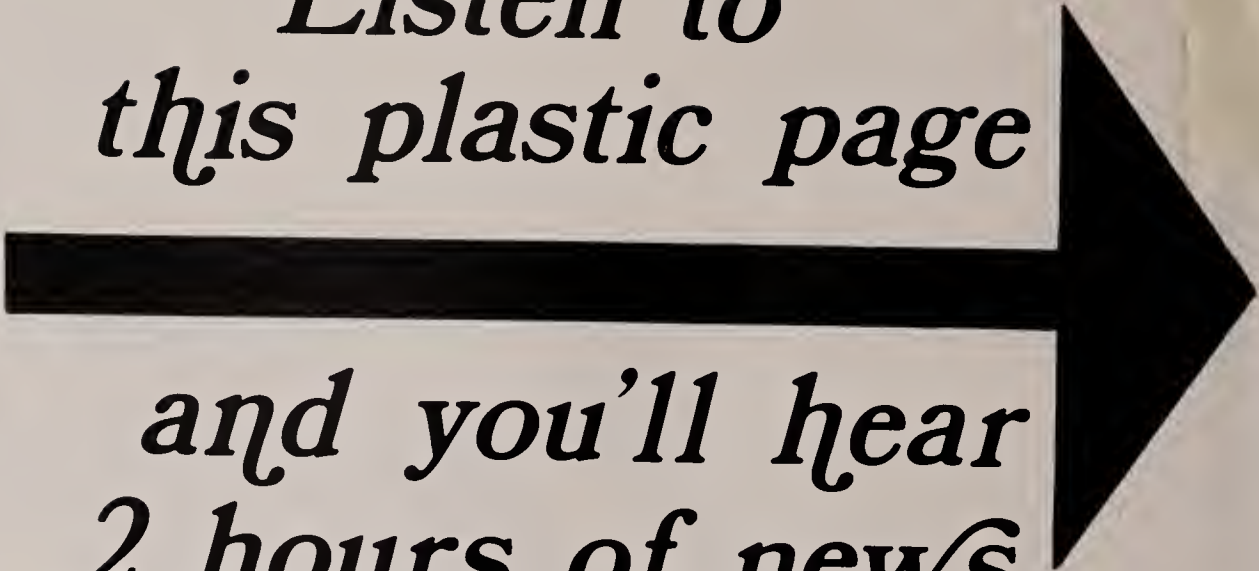


Along with the Sensi-Quik cane, the Go-Sees provide an instructional manual entitled "Touch and an Occasional Tap." It is available on disk and tape and in braille and ink-print. In addition to stating the philosophy of the Go-Sees, the manual teaches the vocabulary of "cane talk words" that enable the traveler to respond quickly and deftly to the messages his cane picks up from the environment. The manual is available on loan from the address below.

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SKNNOCKBURN, ILLINOIS

THE NEW Outlook FOR THE BLIND

June 1971 Volume 65 Number 6

Articles

- 169 Child Rearing by Blind Parents
- 169 The Blind Mother Providing Care for an Infant
Mary A. Ware and Lois O. Schwab, Ph.D.
- 174 Our Set of Circumstances
Joanna Cargill
- 181 Factors Affecting the Child's Evaluation
of the Visually Handicapped Parent
Nicholas S. DiCaprio, Ph.D.
- 187 Teaching Geography to Blind Students: A Plea for Investigation
Charles K. Curtis
- 190 Laboratory Science for Visually Handicapped
Elementary School Children
Herbert D. Thier, Ph.D.

Departments

- 195 Answers to Accreditation Questions
- 196 Current Literature
Mary Maie Richardson
- 197 News in Brief

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Child Rearing by Blind Parents

One somewhat neglected area in the literature dealing with the daily life of blind persons is the responsibilities and problems faced by blind parents. The editors of the New Outlook, therefore, have gathered the following three articles in an effort to present the experiences—the satisfactions, the fears, the problems and solutions—of blind parents in rearing their children. The first article, by Miss Mary A. Ware and Dr. Lois O. Schwab, is based on interviews with 10 blind mothers and presents in detail how they coped with the myriad problems involved in caring for infants and young children. The second article, by Mrs. Joanna Cargill, is the story of a family in which both parents are visually handicapped. Dr. Nicholas S. DiCaprio, in the final article, combines his experiences as a blind parent and as a professor of psychology to discuss the psychological problems that can arise in rearing a child when only one of the parents is blind.

Because these articles may be of practical use to workers for the blind and to blind parents, reprints will be available after July 1. The prices will be: 1-5 copies, free; 6-50 copies, 15c each; 51-100 copies, 10c each. All payments totaling \$6 or less must accompany orders.

The Blind Mother Providing Care for an Infant

We begin with a tribute to the blind mother. Countless blind women through the ages have proven their capabilities and skills in raising families. These women have often been quite innovative and have managed to perform their functions as wife and mother superbly.

Duvall and Hill¹ have grouped the functions performed by the modern family in child care by tasks. These tasks are: reproduction, recruitment, and release of family members; physical care; allocation of resources and duties; socialization; maintenance of motivation and morale; maintenance of order; and placement of members in the larger society. The wife and mother, in Western culture, has had the primary responsibility for the fulfillment of these basis tasks. Traditionally, the husband-father's role has been support-

MARY A. WARE
LOIS O. SCHWAB, PH.D.

Miss Ware is an instructor of homemaker rehabilitation at West Virginia University, Morgantown; Dr. Schwab is associate professor of family economics and home management at the University of Nebraska, Lincoln.

This article is based on research for a master's thesis by Miss Ware, for which Dr. Schwab was the major advisor. The research was made possible by a training grant, No. 658-T-68, from the Rehabilitation Services Administration, U.S. Department of Health, Education, and Welfare.

ing and protecting the family, while the wife-mother's role has been to manage the home and care for the children. For most mothers, care of a young child is a demanding responsibility; for the mother with a physical handicap, it is even more demanding.

A subgroup of women within the classification of the physically disabled with special problems of significance is visually handicapped women. Blindness necessitates new approaches and techniques for many activities of daily living. The figures collected by the National Society for the Prevention of Blindness² indicate that approximately 23 percent of all legally blind persons in the United States are 39 years of age or younger. These are individuals who may face the traditional role of wife and mother with a severe visual handicap. Therefore, the question arises, to what extent does visual impairment limit child-care activities? In other words, what procedures, management techniques, and resource utilizations are employed by the visually handicapped mother in caring for her infant and young child?

□ This study centers on the problems in infant care of 10 blind mothers as shown through case studies. Specifically, the researchers sought to find the answers to the following questions:

1. What is the role of the visually handicapped mother in the dressing, bathing, and physical care of the infant and toddler?
2. What procedures and management techniques does the visually handicapped mother use in providing this care? That is, what use is made of family members and other services available in the community, and what equipment and consumable items are utilized?

The 10 participants in the study were selected primarily from lists of blind mothers who had been clients of the Nebraska Services for the Visually Impaired. Each of the 10 participants was legally blind at the birth of at least one child and was the person with primary responsibility for the care of the infant and toddler. The participants lived in rural non-farm and urban areas of eastern Nebraska. Individual interviews with each mother were conducted informally in her home during the summer of 1968. Categories of child care covered in the interview were the purchasing of clothing; dressing; feeding; grooming; personal hygiene; a brief description of the physical and social development of the child; and the role of "significant others" in the care of the infant and toddler. Although there was a wide range of ages, background, extent of visual impairment (from legally blind to totally blind), age at marriage, and age at the birth of the first child, the cases indicated specific trends in child care applicable to the total group.

□ It was observed that in purchasing clothing for the young child, most of the visually handicapped women tended to rely upon the assistance of a sighted person, usually a shopping companion or a sales clerk. Most of the women had preconceived ideas about articles for which they were shopping. Durability and style of the clothing were generally determined tactually by the mother, while information about color was requested from the sighted person. The final decision to purchase an item was made by the blind mother.

Visually handicapped mothers

Answers Sought in This Study

The subjects and the collection of data

The Child's Clothing

When the mother shopped for the child's shoes, she would specify the price, color, and style. The clerk would then fit the shoes to the child, with the mother tactually checking the fit. Most of the women tended to patronize one store and, if possible, one clerk. They avoided the "self-service" stores unless accompanied by a shopping companion.

It was observed that the responsibility for dressing the young child and infant was usually the visually handicapped mother's. Several mothers had sighted help when they came home from the hospital with their first child. After approximately one month, however, the blind mother usually assumed full responsibility for dressing the baby. All mothers tried to select clothing which was easy to care for, but no specially adapted clothing was used. Garment labels and tags were used to distinguish the front of the garment from the back. There were several criteria used in determining the style of baby gown the child wore: some preferred the back-opening gowns so that ribbons or strings would not get in the baby's face and possibly choke him; some preferred front snap gowns which they felt were easier to put on and remove from the child; many also liked gowns that could be tied around the bottom to insure warm feet for the child.

Little coding for outfit identification was done, for almost all of the mothers associated the color of the garment with the style. Further, during the years when the visually handicapped mothers of this study had infants and toddlers, baby garments were for the most part white, so color coding was seldom a problem. Many of the mothers would pin complete outfits together upon removal from the child, or the outfit would be laundered separately and put away folded together. Ease in care, versatility, and simplicity of line were the main criteria determining the clothing worn by the child. All of the mothers organized the storage of the child's clothing so that placement and selection of garments was facilitated.

□ The mother carried the responsibility for the child's personal hygiene. Most of the mothers bathed their child each day, usually in the kitchen, using a portable bathtub, the kitchen sink, or a bathinette. All of the mothers realized the importance of pre-planning and organized equipment and clothing near the bathing site. By using a zig-zag washing pattern and several repetitions, the mothers were able to make sure that their child was clean. The hair was washed by placing soap on the washcloth first and then applying it to the child's head, although some mothers did apply the soap directly. The mothers kept soap out of the child's eyes by leaning his head back, by keeping a washcloth low on his forehead to stop any suds that might get in his eyes, or by using a no-tear shampoo. The child's ears were cleaned either with a washcloth or a cotton-tipped swab. Frequently, sighted help was used in this operation. In clipping the child's fingernails, the mothers would either cut them with small scissors, bite them off, or file them. Before putting powder on the child's body, many of the mothers would first apply powder to a puff, their hand, or a dry washcloth.

All of the mothers took the major responsibility for changing their child's diapers. Several of the women had help from their husbands in cleansing the

Dressing the child

Identifyng clothing

Child's Personal Hygiene

Changing diapers

child after the soiled diapers were removed. For convenience, some of the women used disposable paper diapers when traveling with their child. Soiled diapers were kept in a diaper pail containing an antiseptic until they were laundered. Only one mother used a diaper service for laundering her child's diapers; the others laundered the diapers at home. The diapers were usually washed separately in hot soapy water to which a chlorine bleach was added. Heat and diaper rash were kept at a minimum by keeping the child dry. The blind mothers were primarily responsible for toilet training their first born. With the later children, older siblings occasionally helped with toilet training. The mothers said that they had more success if they waited until the child was older before beginning toilet training. Most of the mothers felt that they had started toilet training too soon with their first child, usually because of neighborhood pressures.

Toilet training

Changes in the child's disposition were used as indications of a possible fever, as were feeling the child's neck, forehead, or cheeks. Sighted help was then used in taking the child's temperature.

□ It was observed that the blind mother was also responsible for grooming the infant and toddler. No difficulty was experienced in combing a boy's hair, but several of the visually handicapped mothers had difficulty in grooming their girl's hair. Most of the mothers kept the girl's hair short and simply styled. To insure cleanliness in washing the child's face, many of the mothers used a back-and-forth, closed zig-zag pattern. The back-and-forth action reduces the chance of areas of the face being left unwashed.

Grooming the Child

Many of the mothers changed their child's clothes several times a day to make certain that he was well-groomed. Most of the mothers did their own laundry. Clothing was sorted according to color (noted by tactual examination of the style of the article or garment). Many mothers pinned coordinated outfits together upon removal from the child and had these outfits go through the laundry process together. Some mothers would also pin stockings together when removing them from the child. Ironing was also generally done by the blind mothers. Machine-mending was generally done by sighted help, although hand-mending was done by most of the mothers.

Maintaining clothing

□ It was observed that approximately two-thirds of the mothers bottle-fed their infant and the remaining one-third used breast-feeding. Most of the visually handicapped mothers put their child on a rather rigid feeding schedule until foods other than the milk formula were introduced into his diet. The child would then be fed on a fixed schedule during the day and on demand at night. Glass baby bottles were usually used, as were electric sterilizers for germ-proofing them. The mothers had different ways of pouring the milk formula into the bottles: some used a funnel and some a pitcher.

Feeding the Child

Most visually handicapped mothers encountered a great deal of difficulty in feeding the infant certain cereals. Most first tried using a spoon, but getting the food into the child's mouth was most difficult. Some used a thinned cereal mixture and fed it through a bottle with an enlarged nipple hole; others used a stiffer cereal which was not as messy. As the child grew older and learned to open his mouth in anticipation of the spoon, feeding became less

Introducing new foods

difficult. Most of the children learned to drink from a cup or glass by imitating adults. Mothers aided in this learning by helping the child guide the cup to his mouth. Liquid vitamins and medicine were usually administered with a medicine dropper or were added to the formula.

In shopping for the child's food, a delivery service was used by some of the mothers, while others shopped with their husband or some other sighted companion. At home, a sighted person would usually help differentiate the foods for storage. With the partially sighted mother, such help was often not needed because the mother herself could distinguish the types of food. Most of the mothers introduced new foods to their child by encouraging him to try a small portion before eating the other familiar foods.

Finally, it was observed that the children of the visually handicapped mothers sat up at approximately six months of age and began walking at approximately one year. Some of the mothers read to their children from braille books, while others told fairy tales learned in their own childhood. With the later born, older siblings were an influential force in socialization.

□ It was found that the visually handicapped mother plays a most important role in the physical, social, emotional, and mental care of the infant and toddler. The mother, in the majority of cases, carried the major responsibility for conducting and carrying out the various phases of child care. She was the one who planned, controlled, and evaluated the care of the young child. If new methods were deemed advisable, the mother usually made the changes herself or delegated the task to another family member.

Planning in most areas of child care was done mentally, that is, the homemaker had a mental image of the processes to be carried out and of the items she wished to use. She also had a fairly fixed mental schedule for caring for the child, such as a certain time the child would be given his bath and be fed. Unscheduled activities were most likely to occur in shopping and in socializing with the child.

Evaluation tended to be done in retrospect quite some time after the event occurred. Evaluation took place immediately only when difficulty or failure was experienced. Corrections in the existing situation were then made as soon as possible.

Mothers with a visual handicap did change their methods of child care as they gained experience, especially in the difficult areas of introducing solid foods and in toilet training. Satisfaction as a mother doing her job well was derived from the other areas of infant care; most mothers felt adequate in shopping. They also felt that they were quite competent in caring for the rest of their child's needs.

In caring for the infant and toddler, these blind mothers used various techniques to perform tasks more efficiently and safely. Often proficiency was gained through the frustrating trial-and-error method of learning. Many of their child-care techniques were based on those used by sighted mothers, with the necessary modifications being made by the blind mother herself or with the help of relatives or neighbors. Because of the lack of teaching programs in child care for visually handicapped mothers, educators of the

Foods—shopping, storage

Development of children

Role of Mother in Child Care

Planning

Evaluation and change

Learning

blind should be aware of the various child-care techniques that have been proven of value in areas where difficulties may be encountered.

□ The use of trial-and-error learning by the blind mother in child care indicates a need for adapted training programs for blind mothers-to-be. In addition, an awareness and application of home management principles in performing basic skills necessary for the smooth operation of a home will enable the mother, prior to pregnancy, to care for her home with a feeling of security. Such training programs could include the incorporation of child care into the homemaker's regular schedule. Further, the practice of child-care techniques would increase the mother's self-confidence. Confidence in performing these tasks, through a combination of learned techniques and trust in her own ability to use these techniques would free much of the mother's physical and emotional energy. This energy could then be constructively channeled into satisfying the child's other needs and thereby help to form a base for the sound emotional relationships so vital in early childhood.

Although an adapted pre-natal program of study or classes would not completely solve the difficulties which may arise in the care of the infant and toddler, it would alleviate some of the doubts and fears which occur during pregnancy. Classes would also provide the new mother with a knowledgeable resource person to whom she could turn if difficulties were encountered during the various phases of infant care. There is also a need for the development of teaching techniques, literature (handbooks and manuals), and educational devices. The development of courses of study, possibly even a form of supplemented programmed learning, would be of benefit as a point of reference for the professional person as well as the blind mother. Finally, there needs to be much additional research on the problems of the blind mother in home management, child care, and other areas of independent living.

1. Duvall, Evelyn M. and Hill, Reuben L. *Family Development*. Philadelphia: Lippincott, 1962.
2. *NSPB Fact Book*. New York: National Society for the Prevention of Blindness, Inc., 1966.

Conclusions

References

Our Set of Circumstances

"I would like to be with you in Oklahoma City. I miss family sights, like English-speaking guide dogs." So wrote Meredith, our 15-year-old son, who recently returned from a six-week study tour in Europe. In London on the last day of his trip, he acquired a map of the city, studied the "tube" system and went alone wherever he pleased. A visit to the Lord Baden-Powell House, the British memorial to the founder of the Boy Scouts, highlighted the day. Two weeks ago, while I was out of state, he reported by telephone, "Daddy and I rode the tandem to Scouts. We stopped at the Burger King and had a

JOANNA CARGILL

Mrs. Cargill, of Springfield, Illinois, was most recently editor of the Illinois Braille Messenger, a publication of the Illinois Federation of the Blind.

big supper." A few days later, he and his father served a simple dinner for 20 people, most of them blind, in our home. I mention these incidents because they exemplify several significant aspects of Meredith's personality which come from his being the son of visually handicapped parents.

□ I am classified as legally blind. As a teenager, I had been cautioned many times against committing the crime of bringing blind children into the world. Some of my visually handicapped friends bitterly blamed their parents for their blindness. My own paternal grandmother had cataracts and, according to her, "It runs in our family to be 'deef' and blind." Consequently, while still in high school, I quietly decided never to marry. I did not encourage the development of close relationships with men—we were always just buddies. This worked rather well and I was over 30 before I became aware of something missing from my life. By that time I also knew considerably more about heredity and had observed that my sister, with the same hereditary background, was having beautiful, perfectly normal babies.

At 36, while a teacher at the Illinois Braille and Sight Saving School, I married Floyd, a fellow teacher who had been totally blind since he was 17. A year later, when I was old enough to be a grandmother, Meredith was born. Our having a child was a wonderful period for both of us: I was free of the common discomforts associated with pregnancy and we were engrossed in the joy of at last achieving this miraculous fulfillment. We studied the details of pregnancy and childbirth and Floyd joined the other expectant fathers in learning about caring for infants.

Meredith was born intelligent, physically mature, and eager to reach out socially. We have always been grateful that he had these qualities upon which we could build. Naturally, we had the same desires for our child that other parents do; but, realizing our set of circumstances, we were aware of certain special concerns. First, we wanted him to be safe and healthy without too much restriction and frustration. Second, we would have to take special care in insuring that he would have adequate experiences and opportunities. Finally, he should be emotionally secure regarding his parents' handicaps. To meet these needs we have often had to deviate from the usual way of doing things.

□ When we first came home from the hospital, I was occupied with the baby, while my mother, an experienced baby-tender, was also on hand to help. It soon occurred to me, however, that a father in this situation could easily feel left out and ineffective. He could miss some of the most important experiences of fatherhood and the entire family would suffer. Early one morning, therefore, I took Meredith, his bottle, and other paraphernalia out of the crib and went into the living room where Floyd slept on the hide-a-bed. We tumbled in with him and had our first private family session.

People have many preconceived notions about how a baby must be handled, cared for, and loved. I discovered while still in the hospital that ours was content, even though I was too weak to lift him and had to roll and pull him about. A young girl visiting us from the school held him for a long time rolled up like a puppy in her lap, but he was happy nevertheless.

Another example of such a notion was the custom in my family of waiting

Author's Background

Marriage and birth of child

Plans and concerns

The First Year

Bathing and feeding

to bathe the baby until he was hungry and tired. The idea was that after bath and food he would go blissfully off to sleep for a long time. But this was wrong for me. When Meredith was hungry, he was also restless and squirming, and I was afraid he would wriggle out of my hands. Besides, I felt that bath time should be a happy time and, therefore, out of consideration for him, I always bathed him when we were both relaxed.

□ Floyd did his share of taking care of and attending to Meredith. Changing diapers was quite a ceremony. Meredith did not seem to mind if it was slow at first, for the entire process was enjoyable with all the talking, patting, and powdering. He was very patient with our fumbling as we dressed and fed him. Floyd had a problem at first making sure that the nipple on the bottle had not collapsed, but he learned to listen for signs that the milk was flowing.

Father and Son

A little later, the times for bathing, potty, and going to bed became intimate father-and-son times. Floyd rocked Meredith often and even made up his own lullaby. He also began a series of bed-time stories about the "Hinken Honken Bears." Meredith rarely laughed aloud when he was little, but his delight would just spread over his face and stay there. People often remarked, "It's a shame Floyd can't see how beautiful his child is"; I always answered, "He can tell."

□ When my maternity leave from the school was ending, there began a period of real conflict for me. Basically I believe that a mother should be at home and that hired help cannot replace her. On the other hand, I was fortunate as a visually handicapped person to have a professional position and leaving it at that point might have closed the doors permanently. Also, because of the skills and experience that I had as a teacher, I was able to make a valuable contribution to the education of others. We were at the time, crammed into an upstairs apartment in which there was hardly enough room for Meredith to learn to walk. I could, by returning to teaching, qualify for retirement in a few years and, in the process, improve our economic condition. We found the best person we could to care for Meredith and the home while I taught. Those years were very difficult. I was constantly torn between my roles of wife, mother, and teacher, feeling all the time that I was not fulfilling any of them well. I was always tired and because the ordinary demands of daily living require more effort when vision is low, I soon learned that it was impossible to do anything outside of home and school. To attempt anything else left me completely exhausted, a condition that was always disastrous. I continued teaching full-time (although my former creative sparkle was gone) until we moved to Springfield. Meredith was then six years old.

A Difficult Time

Throughout this period, Meredith was growing and developing beautifully, although he sucked his thumb and was not completely toilet-trained until he was almost four. The only time that our whole family was sure of being together was in the late evening and we consequently were never able to get him to bed until late. To this day, he considers himself a "night person."

Togetherness

□ We began traveling with Meredith when he was two months old. One day my mother approached me and earnestly recommended that I be the one to carry him when we went out. It seemed to make everyone uneasy to see a

Traveling

totally blind man carrying a baby. It was, however, safer the way we were doing it. Not only did I have to act as a guide, but also I am the one who stumbles, trips, turns my ankle, and goes sprawling. Floyd is strong, sure-footed, and, after all, the child's father. So I said, "No, Mother. We must do it our way." Floyd had only one fall while carrying Meredith. We stepped on an icy patch of sloping sidewalk and all three of us went down together. Floyd instinctively maneuvered so that Meredith did not even touch the sidewalk.

Fortunately, a salesman introduced us to the Stroll-O-Chair when Meredith was still very young. This combination chair-table-stroller has many safety features; as a high chair it is almost impossible to tip over; the safety belt is designed to be comfortable and to allow movement in the seat, while keeping the child from rising in the chair. Meredith accepted this belt system in both high chair and stroller until he was able to use other chairs and was thus saved from some dangerous falls.

Stroller

Almost everywhere we went in those days, we walked behind his stroller. When it was time to abandon it, we used a harness. The idea is distasteful to most people and harnesses are rarely seen anymore. We felt, however, that it was the best device for a child who is too short to walk far with his arm stretched up and a fist clamped over his soft little hand. If, somehow, the big fist lets go, the little toddler can get into trouble in a flash. In a harness, the child is free to go at his own pace, move without strain, explore a little, and still be safe within the protection of the big fist. When Meredith began to rebel against the harness, he was old enough to understand, "If you will hold my hand, we will leave it off. We don't want you to get hurt or lost." Until we could depend on him to watch traffic lights and to keep track of us, he was thus restricted when we walked; but the companionship, and the contribution that he himself was able to make to the walking experience, must be noted as positive aspects of this arrangement.

Harness

□ In a way, we were fortunate to live on a busy street. Children on quieter streets feel safe in running across or playing in the street, developing careless habits and exposing themselves to potential danger. There was no question in our case: it was *never* safe for a small child in the street. Neighbors were careful not to entice children across and everyone was watchful. Meredith learned quickly, not only from our warnings but also from my alarmed reactions the two times that he did go into the street. We chose not to fence in the yard. To fence someone in is to fence everyone else out and Meredith needed contact with other people. One summer, when he was at the irresponsible age of two, I had to watch him every minute. Later, only one rule, which he followed, was needed: "Don't go off the block." This gave him plenty of freedom and many friends.

The Neighborhood

Between the ages of five and eight, it seems that little boys become fascinated by fire. When Meredith began to show interest in matches and in the trash fires in the alley, we told him, "If you want to strike matches or help build fires, fine. Only always be sure to ask some grown-up to stand by and watch." Twice, after that, we sat down at the kitchen table with the match box and he struck matches and watched them burn to his heart's content. Of

Interest in fire

course, now and then, he let the match burn too low and learned about the pain that fire can cause. This approach to his interest in fire worked well.

□ Our general pattern of living as blind people is conducive to safety. Our own health and well-being demand regularity: three unhurried meals a day, plenty of sleep, everything in its place, very little rushing and confusion, and few pills and medicines, all kept out of sight. Our life lacks the rough activity and high adventure which might have led to accidents.

Discipline and safety are closely related and the child who understands that "No" means "No" is thus rather well protected already. In an atmosphere of mutual respect, a child will understand that restrictions are for the well-being of all. Meredith was responsive to "Don't ride anyone on your bicycle," "Come when you hear the bell," and "Telephone us if you are going to be delayed very long." We have tried to be lenient in matters that were not vital, while remaining firm on those things that to us seem very important. Meredith's understanding of this has saved us many worries.

The general attitude in our family is that preferred treatment should be given to the people who love you, those who have to tolerate your foibles and failures, those upon whom you must daily depend. Your kindness, courtesy, and consideration should be showered upon them and not be reserved for strangers. We believe that this attitude of mutual respect is the secret of discipline and social poise. Children learn not by what they are told or made to do, but by their daily living experiences in the home. I have always felt that if a child is basically secure and happy at home, he will also be equal to the inevitable problems that he will face in the outside world. To build his strength of character and his overall personality, someone at home should be flexible, relaxed, and available. Respect for people outside the home is thus established by example within the home.

□ One potential problem of concern to us was that Meredith might be deprived of that variety of experiences which is so important to a child's well-rounded development. As he grew up, however, no difficulties ever developed in this area. We took Meredith with us almost everywhere. Because of this and because of the fact that we are confined to public transportation, he, unlike many other children, was never left waiting in the car or at home to watch television with a baby sitter. We felt it was better for him to be dragged around by those who loved him than to be excluded, though perhaps more comfortable, by being left at home. By the time he was five he was accompanying us to out-of-state conventions, helping his father through doors that said "MEN," and enlightening me when a hotel door refused to yield by saying, "Mama, the door says 'IN'." He learned all about taxis, escalators, trains, restaurants, and other such things on these trips.

Since he was about 10, he has paid the check in restaurants, calculating the change mentally as his father does. He knows the streets of Springfield well, having early begun to learn them during our extensive walking. He has become remarkably fluent in his speech, possesses a large vocabulary, and has a good eye for details. These accomplishments have grown, at least partly, from Floyd answering his many questions in great detail and his own explaining

Home Life

Discipline and safety

Mutual respect

Insuring a Variety of Experiences

Learning and responsibility

and describing what he sees for his dad. In stores, we could not very well tell him not to touch things when such tactual examination was so important to us. Such a privilege, however, has always been recognized as such and there has been no problem about his complying when one of us would say, "That's all. We don't want to break it." Except for our sometimes finding surprising things in the shopping cart, his behavior in stores has, as far as we know, never been a cause for concern.

The television was a great help in teaching Meredith about the everyday world, and we appreciated it until he was about seven. Then it began to enslave us. At age nine, Meredith wanted to watch every program. It was then that I concluded that most television was geared to the intellect of a nine-year-old, and it was a relief when our set broke down. We left it out of order for two years. During this time, Meredith busied himself with more creative activities. We have perhaps over-indulged him in books, records, kits to make and do, telescope, microscope, camera, etc.; but it seems that when the time is right he makes good use of them all.

□ We are grateful that there were a number of relatives to enrich his experiences as he grew. My parents lived on a small farm, and there were often big family gatherings there. Meredith would get lost among the cousins, climbing in the barn, wading in the creek, rolling on the hill, and roaming all day. Sadly, when he was 10, our family had one of those shattering quarrels which left our relationship utterly broken. Old feelings of resentment, guilt, and jealousy bubbled to the surface; and every attempt at reconciliation only seemed to widen the chasm. This has been the most unfortunate and painful thing that has happened to our son. We had depended heavily on aunts and uncles for many opportunities for mutual social and emotional experiences. I mention this because we suspect that the presence of handicapped people in a family often creates unusual tensions. Our recommendation would be that a handicapped couple live far enough away from other members of the family to maintain only an occasional relationship.

□ When Meredith was 11, he was able to join an excellent Boy Scout troop. This has been a most gratifying experience for both him and us, for it has opened up many opportunities that we could not have made available to him. He associates with active, outdoor men, learns the give-and-take of living with other boys, develops many new skills, meets remarkable experts, and takes trips into the woods and along rivers where we could not practically go. We highly recommend Scouting as an excellent character-building program that can help to "round out" any boy, but particularly the son of visually handicapped parents. Meredith's experiences in church have been invaluable also. He has made many friendships there, taken part in programs and services, sung in choirs, and developed confidence in God, others, and himself.

"The children of blind parents have to grow up too fast," said one of our friends. "They have too much responsibility and are old while they are still children." We have observed how some couples have fallen into the habit of using their children's eyes. Perhaps we have swung too far away from demanding our son's time and energy, even when we should. We allow him the

The television and other activities

The Larger Family

Scouting

The child of blind parents

freedom to read, to tinker around the house, and to participate in as many outside activities as he can handle. There are times, though, when we have to depend heavily upon him; and he has greater than average responsibility for taking care of himself. Occasionally someone hints that our son should be doing more to help around the house, and I feel guilty for a moment. Then I re-evaluate and conclude that our situation is not like everyone else's, and we must do things in our own way.

We are fully aware that people's first impression of us is as "that blind couple." We have always tried to show Meredith's friends that we are *people*—Meredith's mom and dad. We visited school, spoke to classes as community resource agents, attended PTA meetings, helped with group projects, prepared special treats, and made an extra effort to become acquainted. I have worked in children's church activities, and Floyd is chairman of the Boy Scout troop committee. When the children come to our house for meetings or parties, they get the living room, dining room, and stereo; and I serve them the same way Meredith serves us when we have guests.

One day Meredith expressed dissatisfaction that we are unable to ride all around town and shop wherever we please, as his friends do. "It is true that this is one of our limitations," I responded. "But let's look at it this way. No one has life exactly the way he wants it. I suspect some of your friends look at you and wish they had a big house like yours, or such a big library, or the privilege of taking trips, or a father that is as kind and as thoughtful as yours. What we have to do is be grateful for the things we have, and get all we can out of them. Then the disadvantages won't matter so much."

□ In general, Meredith does this, and even has a knack for turning his liabilities into assets. Rather than tolerate inadequate transportation, he chose to walk the three miles to and from junior high school. Soon he took pride in this activity and refused to make an exception even in rain and sleet. In this way, he used up excess energy and gained a good walking stride while others were being taxied to school. Also he learned more about the city, met interesting people along the way, and inspired his friends to walk.

He is always sharing his books for class projects; but his attache case was too small, and too heavy, especially when he had his cornet and gym bag to carry as well. As a possible solution, I found a heavy white duffel bag. He filled it up and threw it over his shoulder; it has been his constant companion ever since. If he must be a little different, he capitalizes on it. With the bag, for instance, he likes to dive into it, head and all, and bring out goodies: Will Durante's *Our Oriental Heritage*, a bag of popcorn for a teacher's birthday, or a "surprise box" which gives an electric shock to anyone curious enough to pick it up.

□ Any one who has children is limited in some way by his own set of circumstances. No one can do *everything* he desires for his child. We have tried to give Meredith the best of everything available in our own particular set of circumstances. We can only trust that he will be able to fill in the gaps for himself. A famous mother once said, "If I can present one fine man, I will have done the world a great service." This is our desire.

Visibility and the stereotypes

Philosophy of life

Meredith's Character

A Final Word

Factors Affecting the Child's Evaluation of the Visually Handicapped Parent

It should be noted at the outset that the following discussion of family life in which one parent is sighted and the other is visually handicapped is largely drawn from the experiences of the author and of several friends with whom he has discussed the question. These preliminary observations are offered with the hope that some of the ideas and suggestions will be investigated further and subjected to more rigorous testing. For the layman, this discussion may be of use in helping him deal with some of the problems associated with bringing up a child when one parent is visually handicapped.

□ In a discussion of this nature, it should be recognized that there are many individual differences in family settings, including the number and sex of the children in the family and whether it is the mother or the father who is visually handicapped. The most difficult problems of all naturally arise from the specific individual constellation of characteristics possessed by each member of the family. Each person and setting is so unique that both the specific problems and their solutions are highly individual matters. There are, nevertheless, certain common problems which, although varying in detail from family to family, are similar enough to be dealt with in a general way.

Each parent, whether he realizes it or not, or whether or not he deliberately fashions in his behavior according to some model, takes a fairly definable role in the life of the family. If the roles are not stable, or if one parent does not see or accept the role taken by the other, many problems will arise between the parents and between the parents and their children. The role which each parent assumes is communicated to the child and greatly affects their relationship. Specifically, the parent's role will influence the way in which the child views that parent and his evaluation of both parents.

□ During the first year of life, a child does not have the cognitive equipment to perceive and evaluate his surroundings. It would appear that during this stage the blind mother or father is at no disadvantage when compared to the sighted parent. The child is not very mobile and the attention he requires is easily within the capabilities of the visually handicapped parent. As the child's psychological and physical faculties develop and his contacts with the environment increase, the differences between the parents become more and more salient. This fact is true in any family. Every child learns that his mother and father are different, do different things, and relate to him in individual ways. These differences are not always readily accepted and learned by the child. Through his observation of other families and other contacts with the environment, the child usually comes to accept the differences between his mother and father. When there is a visually handicapped parent, the differences between the parents extend to the crucial mat-

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Different Families, Common Problems

Parental roles

Differences Between Mother and Father

ter of the child's respect for the parent, a condition which can seriously affect the relationship between the child and both of his parents.

Probably the earliest situation in which the child perceives the differences between his blind and sighted parent is in pointing to objects. Learning is promoted by showing and parents name objects as they point them out or present them to the child. The child also points to objects as he names them. A child will often hold an object without necessarily verbally indicating that he is doing so, and expect the parent to name it. Sometimes the sighted parent simply names the object even though the child has presented it to the blind one. This action may unnecessarily accentuate the difference between the parents, for the sighted parent can just as easily tell the child to hand the object to the other parent instead of just pointing to it. Furthermore, the child is quite receptive to training at this stage and can easily be taught to hand things to the visually handicapped parent as a matter of course, with the action in no way affecting the child's respect for that parent.

□ One of the greatest sources of problems for the visually handicapped parent, and a factor which clearly distinguishes the two parents, is the matter of discipline. Before one can properly correct or discipline a child, one must know correctly what the child is doing, or whether he is following instructions that have been given. In both instances the blind parent is at a serious disadvantage when compared to the sighted parent. Difficulty with this aspect of child-rearing can greatly affect the child's evaluation of his parents and may result in his fearing and respecting only the sighted parent. The author has frequently witnessed a visually handicapped parent mistakenly scold a child; the child then reacts angrily and rebukes the parent for the error. One cannot always detect what a child is doing simply through the sense of hearing.

There is no foolproof solution to this problem, although an occasional simple query about what the child is doing will generally secure the information the parent needs in order to discipline the child. This also enables the parent to keep track of the child as well. Child psychologists tend to agree that disciplining a child does not have to be emotional or terrifying. If the parents carefully set forth the limits (certain basic do's and don't's), the normal child will respond to gentle chiding and correction without a great deal of emotion. If the parent becomes overly emotional, the child may be so frightened and disturbed that he will resist the discipline. Children usually know when they are disobeying their parents and therefore only need to be reminded on occasion, since their inner controls are not as strong as the attraction value of the forbidden object. The principle is that the blind parent should know as much as possible about the situation before correcting or disciplining the child. Children who have been trained to do so will provide the necessary information quite willingly.

□ One often hears of or directly encounters "the little tyrant" who rules the family by temper tantrums. The psychiatrist Alfred Adler believed that every child has a strong drive for power, a drive directed not only to his being independent, but to ruling those around him. If there is any truth in this

The problem of pointing

The Problem of Discipline

Solutions

Power and the Child

view, the desire to rule the parents has a greater chance of success with the blind parent than with the sighted parent. The child soon recognizes that he can do things right in front of the blind parent and often not be noticed. Not being able to "get away" with the same behavior in the presence of the sighted parent may lessen the respect and normal fear which the child develops for the parents. If this situation is mishandled, the child may actually delight in carrying on activities which are disapproved.

If the child develops normally, and the parent has a good relationship with him, there is little reason for such behavior to occur. The child develops a conscience which, in a sense, takes the place of the parents and other sources of authority. The conscience, if properly formed, follows certain rules and prescriptions even when the parents and other authorities are not present. Since conscience is formed rather early in life, when the child is most under parental control, there is no defensible reason for allowing the child to acquire power over the parent. One can foster obedience by rewarding it when it takes place, and by making disobedience unpleasant. In a normal relationship between children and parents, whether sighted or not, the child will identify with the parents and will want to please them. The little boy copies his father's mannerisms and makes it very clear that his father is a highly important person in his life. The little girl also naturally wants to be like her mother. She wants to dress as her mother does, to cook and keep the house, and even to compete somewhat for her father's attention. Both boys and girls wish to be like the same-sexed parent and to please the other parent. If these tendencies are not disturbed by being mishandled, they can serve to create strong bonds between child and parent, no matter what the parent is. The child does not have preconceptions about what a good parent should be. If he is treated with warmth, acceptance, and respect, he will develop normally and form a strong bond with both parents.

□ A family relationship in which one of the parents undermines the authority of the other and tries to gain the allegiance of the children can seriously damage the relationship of the children with the other parent. In the long run, both parents lose in the competition for the affection of the children. A situation of this type may develop when one parent is visually handicapped, with the blind parent's authority being undermined by the sighted parent in subtle and not-so-subtle ways. The sighted parent may flaunt his superiority in matters such as driving, shopping, or money-management. The idea that one parent has to do most of the vital work may thus be conveyed to the children.

It goes without saying that such undermining need not occur. The areas of authority and responsibility which each parent exercises must be carefully worked out in a spirit of mutual support rather than competition. If such a division of authority is consistently maintained, the mother, for example, will determine whether or not the children may have snacks. The father does not interfere with her authority, no matter how much the children plead with him to give in. Through this division and specialization of authority, the respect for each parent is preserved.

The development of a conscience

Parental Competition

Separation of areas of authority

□ The child will, however, be confronted occasionally with instances of the direct limitations of the visual impairment. An example would be an accident in which the parent stumbles over a toy or hurts himself in a way directly attributable to the visual impairment. While many accidents can be avoided by training the child to care for and remove objects from the areas of traffic, there are some that cannot be anticipated or prevented. In such instances, the child may have difficulty in understanding the reason for the accident, although he may perceive that one of his parents is different from the other in certain rather puzzling ways. The enduring effects which such confusing situations may have on the young child are not known. One possible effect, of course, would be an unfavorable comparison of the two parents. Those psychologists and psychiatrists who stress the importance of early experiences in the formation of the personality could hypothesize severe consequences for the ego development and social relationships of the young child.

It should be noted that children are faced with many unknowns and puzzling experiences, but are nevertheless, very accepting of their environment, even tolerating contradictions during the early years. As the child's reasoning abilities grow, he seeks out more and more information about his world and unravels many of its mysteries. The same applies to knowledge of his parents, including the visually handicapped parent.

Minimizing strangeness

If the very young child points to something he wants and the parent cannot quite see it, there are a variety of ways of minimizing the strangeness of the situation. For example, the parent may let the child guide him to the object (something children do quite eagerly) or he may give the child a yardstick to touch the object. If good communication has developed between the parent and the child, the child will readily indicate what is sought.

□ With both parents working harmoniously together and with a little ingenuity, most of the problems regarding an unfavorable comparison of the two parents can be dealt with adequately. Some situations outside the home, however, where there may not be adequate understanding of the limitations and capabilities of the blind person, may arise. For example, a sighted friend may have to do things that the blind person cannot do. Purchasing food at a vending stand may be such an awkward situation that the blind person will not attempt it and allow the sighted friend to take over the situation. Sometimes disciplining the child is a touchy problem when he is playing with the children of the friend because there is a loss of communication. The friend may have to take over the task of discipline. Also, the fact that the friend must do the driving may create an unfavorable comparison of the parent and the friend.

Difficulties Outside the Home

These difficulties also can be handled without necessarily bringing the authority of the parent into question. For instance, if the blind parent pays for and helps distribute the food, the children will certainly recognize the value of these activities. If the friend informs the parent of what the child is doing, then the parent can do the disciplining. The fact that the friend always drives can be easily understood by the child and accepted as a matter of course if the parent does not make an issue of it. While certain embarrassing situations will occur, many of them can be avoided with a little thought.

Preventing misunderstanding

Some parents may feel that their child will be ashamed to tell other children about his parents, or that he would not want to take his parents to school and other functions. This view is totally wrong. The child of visually handicapped parents is, more often than not, proud of what his parents can do. Unless there is a poor relationship with the child (a condition which has nothing to do with the visual impairment), the child will be quite willing to introduce his parents to other important people in his life.

Contrary to popular opinion, most of the difficulties associated with rearing children when one parent is visually handicapped can be dealt with satisfactorily. Above all, both parents must share the responsibility for the numerous tasks required to bring a child from a helpless infant to a mature, self-supporting, and productive adult.

□ One aspect of the relationship between a child and a parent who is visually handicapped (or, for that matter, who has any form of severe disability) is the extent of the child's awareness and understanding at differing ages. The child brings up questions from time to time in order to clarify his perception of the situation. Just as there is no one best time to teach the child "the facts of life," so there is no one specific time to teach the child about the nature of the visual impairment. The child is certain to question the parent at different ages, and during these periods much can be done to enhance the relationship.

In trying to comprehend the nature of the impairment, the child may incorporate some features of it in his play and dramatizations, something which could be very disturbing to the parent. There is no malice in this, however, and the parent should not become annoyed. If it goes on for too long, the parent should simply suggest another theme. At every age, the greatest asset the parent has is the child's acceptance and understanding; and the parent can always count on this if his relationship with the child has been good.

As a result of the nature of the impairment, the parent may relate to his child with a great deal of physical contact. It has been demonstrated that a lack of physical contact with a child is deleterious for normal development and that an abundance of it is beneficial in promoting a sense of security. A close bond between a child and his parent is formed through close contact, and this happens rather frequently between children and their visually handicapped parents. Such a relationship also tends to promote understanding.

□ If a dog can be trained to "guide" and serve its master, a child certainly can be taught to "guide" and to do much more while, at the same time, developing a much deeper relationship with his parent. As was previously mentioned, a child of a blind parent is of necessity often called upon to assist that parent. Mishandling of this situation can give the child a sense of power over the parent, which is a highly undesirable thing. If the child's help is enlisted properly, it can be a most potent factor in fostering a solid relationship between the child and parent. If the parent is doing something for which the child's help is absolutely essential, the child and parent will develop a sense of closeness which could not occur in any other way.

The help which is referred to here is not of the "chore" variety, but the kind of assistance that only vision can provide. When the child realizes that his

Meeting the child's teachers

Explaining the Handicap to the Child

The handicap in the child's play

Physical contact with the child

The Child Helping the Parent

Cooperation is the key

part is quite as essential as the parent's, there is no sense of power over the parent, but a close working together and a very rich experience for both. In preparing the child's breakfast, if the child assists the parent by giving information about the cooking of the food, the child is providing meaningful assistance. Rather than diminishing the respect for the parent, these situations immeasurably bolster it. The child knows that the parent is superior to him and accepts that, and he does not have to prove his competence either, because he is given an adequate opportunity to make a real contribution.

The child quite naturally looks up to his parents and uses them as models. The blind parent may have some problems in this area. A father cannot drive the family car, or make a very impressive score when he bowls but, then, not every man is a star baseball player, or bowler, or anything else. There certainly is not just one right way to bring up children properly, but no matter what method is used, it is essential to gain the child's admiration. This should not be difficult to do. The parents, after all, are the most important adults in the child's life, and the child wants to be like one of them. A child may be quite impressed with the parent's ability to type, spell properly, repair a toy, or any of the numerous things which are within the competence of most blind people. Occasionally the parent should deliberately demonstrate his competence. Certainly, there are more than enough instances of incompetence.

□ The experiences of the present author and those with whom he has spoken strongly indicate that children brought up in families in which one parent was seriously visually handicapped are not adversely affected by this family arrangement in itself. As a matter of fact, the evidence seems to point to a better-than-average development and functioning, although this assertion can and should be empirically tested. Bringing up children places a great amount of responsibility upon parents and for some, under certain circumstances, having children may be considered highly ill-advised. If the parents have a poor relationship with each other and with the world in general, having a child imposes more stress and makes life still more difficult for them. Having children, however, is a highly personal matter for any parent. Blind persons can be, and many are, good parents.

Perhaps there is something to be learned from the practices described in this paper. Child-rearing is a matter of great concern these days, and many parents are outstanding failures. The suggestions which are presented here are not only applicable to families in which one parent is visually handicapped, but are probably effective in all parent-child relationships. If the view of the author and those he has interviewed is true, namely, that children of families in which one parent is blind are average or better in personality development, then child psychologists ought to take a look at the methods of dealing with children which are used in such families.

The parents as models

Conclusions

A wider application

Teaching Geography to Blind Students:

A Plea for Investigation

That the study of geography is considered a necessary and valid part of public school education is obvious. Curricula, at all levels, contain many course outlines that, regardless of title, are discernibly oriented toward geography. Specific claims are made for geography training that, although perhaps not proven empirically, are, nevertheless, stated in every text on geography methods. Numerous authors suggest that the study of geography improves one's powers of observation, memory, imagination, judgment, and reasoning, and inculcates a geographic outlook.⁸

□ An appreciation for the field of geography demands that the student have some understanding, at an appropriate academic level, of the following concepts: spatial distribution, areal coherence, the regional concept, the location theory, the cultural viewpoint, the human relationship to a natural resource, the dynamic nature of geographic analysis, the importance of time, the spatial interaction, man-land relationships, and global interdependence.⁶

Although at the primary and intermediate levels, children may not be able to articulate these concepts as they are stated by the professional geographer, they will, in classes devoted to social studies, be subjected to sequential programs of geographic knowledge and skills which, if properly learned, will enable them to work satisfactorily in the field.

In the teaching of geography, certain tools and methods are commonly used. In any classroom, therefore, one might expect to find globes, various kinds of maps, atlases, pictures, aerial photographs, statistical information presented in chart or graph form, books containing descriptive passages, and so forth. Further, if the teacher has been trained in geographic technique, the program will be augmented by relevant field studies of the physical and cultural landscapes.

□ Through the use of field trips and the several tools of the geographer, presented in regional and sample studies, the students are expected to develop specific skills which will enable them to function, at least at their respective academic levels, in the world of the geographer. A list of skills that children leaving the elementary school might be expected to have would include the following: the ability to observe, record, and interpret data gathered from field studies; the ability to observe and record both details and inferences from ground level and aerial photographs; some ability to relate pictures to large scale maps and to use data from pictures to explain some of the generalizations of small scale maps; the ability to draw rough maps; some understanding of the various relief features of an area as read from a topographic map; the ability to read and make symbolic charts of natural phenomena and their relationships to people and to read and construct single line and bar

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Concepts of Geography to Be Learned

Tools and methods

Skills to Be Acquired

graphs; the ability to use prose passages as sources of data to help interpret pictures, maps, and charts being used in the study of distant landscapes and regions; the ability to write an acceptable geographical description from data extracted from pictures, maps, charts, and prose selections; and the ability to read the cultural features of a landscape from maps and photographs.⁴

□ If the study of geography demands the acquisition of certain skills in the use of geographic materials and methods, then the teaching of geography to blind children poses certain pertinent questions which present areas for investigation. Specifically, these questions include the following:

- a. Which of the materials commonly used with sighted children can be translated into suitable forms for use with blind children?
- b. How might these materials be used meaningfully with blind children?
- c. How psychologically sound are the materials currently used to teach geography to blind children?
- d. If the understanding of geographic concepts depends upon the development and use of certain specific skills, which concepts will present the greatest degree of learning difficulty?
- e. In classrooms in which blind students are integrated with sighted children, how do the general levels of geographic competency of the blind children compare with those of the sighted children?
- f. How do the general levels of geographic competency which are attained by blind students in a residential school compare with those of blind children in an integrated setting?
- g. Can blind students, in either integrated classrooms or residential schools, reach a level of geographic understanding and competency, as determined by specific behavioral objectives, comparable to that of sighted students?
- h. What materials or instruments can be used to satisfactorily assess the geographic understandings and skills of blind children?
- i. What teaching strategies should be considered when planning field studies so that such studies will play a relevant part in the geographic education of blind children?
- j. Are the social studies texts, which are usually just brailled copies of those used in regular classrooms, appropriate for use with the blind? If these texts are not appropriate, who will accept the responsibility for producing suitable materials?
- k. Are resource teachers and itinerant teachers in regular schools with programs for blind and visually handicapped children presenting material to their students in ways that are suitable for comprehension by their remaining senses in the case of those who are totally blind, and through their residual vision in the case of those who are partially sighted?
- l. What might be a pedagogically sound set of objectives for teaching geography to blind children?
- m. How might geography programs, in both the integrated classroom and the residential school, be structured so that blind children may experience a valid approach to the study?

Questions About Geography for Blind Children

Comparing geographic competency

Adequacy of text material

□ Quite obviously, several of these problems must have concerned teachers of blind children. Curiously, however, a paucity of literature exists in this area and one searches in vain for informative materials dealing with the preparation of geography lessons to be taught to blind students. In fact, during

The Literature

the past decade only four articles that deal specifically with some aspect of the problem have been published.^{1,2,3,7} Typical of the material presented in the literature is the following statement:

In the study of geography, relief maps and globes are used, and excursions are taken to acquaint the children with their surroundings. Visits to museums and the use of specially prepared educational models provide additional experiences. In general, it may be said that practically all subjects can be taught to blind children.⁵

An investigation of the curricula of several residential schools for the blind reveals that geography is intended to play a significant role in the educational process. The *Eighth Grade Social Studies Guide* of the Iowa Braille and Sight Saving School at Vinton, Iowa, states that the study of the "physical features of the world" such as "climatic conditions, land surface, resources, and industries" is "important." Among the various objectives listed for this program is "To develop interest and skill in the use of maps, globes, and charts." It is interesting to note that nowhere in the guide are instructions given for the actual use of these materials and one is not told how the physical features should be taught.

The impressive 240-page *Course of Study in Social Studies* of the New York State School for the Blind at Batavia, New York, also neglects to state specifically how various materials and methods should be presented. The second-grade teacher is encouraged to take her students on a tour of several stores as part of a community study, but no mention is made of the activities that take place during the visits. Outline maps, topographic maps, and climatological maps are suggested for use in teaching the geography of the United States to intermediate special class students, but no instructions in their use are given.

The most interesting aspect of the social studies programs used in schools for the blind is that, as described, they read very much like courses for sighted children. In fact, many administrators of residential schools for blind children, in reply to my request for curriculum guides, said that the state curricula were followed in their schools.

□ Certainly the teaching of geography to blind children is a valid area for investigation. While it appears that geography is ostensibly being taught in both residential and public schools, too little information exists concerning the relevancy of the methods and materials being used.

1. Garry, R. J. and Ascarelli, A. "Teaching Topographical Orientation and Spatial Orientation to Cogenitally Blind Children," *Journal of Education* 143 (December 1960):1-48.
2. Gildea, R. Y., Jr. "Maps for the Blind," *Exceptional Children* 22 (1956):340.
3. Gilson, Charles; Wurzbarger, Berdell; and Johnson, Daniel. "The Use of the Raised Map in Teaching Mobility to Blind Children," *New Outlook for the Blind* 59(1965):59-62.
4. Hardwick, Francis C. *Teaching History and Geography*. Toronto: W. J. Gage, Limited, 1967, pp. 11-16.

(Continued on Page 194.)

Curricula in use

Specific guidelines missing

Conclusion

References

Laboratory Science for Visually Handicapped Elementary School Children

The tendency of recent innovative projects to move away from a complete emphasis on textbooks and to take an active, materials-centered approach is benefitting more than just "normal" children, for many groups in special education are beginning to see the importance of applying this philosophy to their field. The visually handicapped pupil, who must deal with abstractions and rely on verbal communication at an early age, needs direct learning experiences even more than most children. He receives many verbal instructions and descriptions which he must constantly piece together into an understandable whole without visual cues. The concrete, language-building experiences on which many of the "new science" programs are based seem particularly suited to blind children.

□ The purpose of Adapting Science Materials for the Blind is to provide such an experience-centered instructional program in science for visually handicapped elementary school children. Cooperating agencies involved in the project are the Alameda County (California) Public Schools, the California State School for the Blind in Berkeley, and the Lawrence Hall of Science, University of California, also in Berkeley. The project is funded by a Title III, E.S.E.A. grant from the State of California.

Starting with the program developed by the Science Curriculum Improvement Study,¹ the project analyzes existing units and tentatively designs adaptations necessary to make the materials meaningful for visually handicapped elementary school pupils. These adapted materials are then taught in an exploratory manner by project staff members to classes at the California State School for the Blind. Based on the results of these trials, the materials are revised, written up (as teacher's guides and student manuals) and produced (in the form of equipment) and then tried out by classroom teachers working both in regular school programs (one or two visually handicapped pupils per class) and at the Frances Blend School in Los Angeles where the classes are made up entirely of visually handicapped children. As a result of these field trials, the materials are revised once more and then made available to interested teachers.

During the various exploratory and field testing phases of the program, work proceeds on the development of evaluation materials² that will enable the teacher to obtain information about the changes that take place in pupils in her classroom during the program. Since the program under development is based on the work of the Science Curriculum Improvement Study, the following short statement describing the work of SCIS will briefly explain the rationale and approach of the adaptation project.

□ The Science Curriculum Improvement Study is developing ungraded, se-

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The ASMB Project

Analysis, design, and testing

SCIS Programs Are Adapted

quential, physical and life science programs for the elementary school—programs which in essence turn the classroom into a laboratory. Each unit of these programs is carefully evaluated by SCIS staff as it progresses from the early exploratory stages to the published edition. The units originate as scientists' ideas for investigations that might challenge children and that illustrate key scientific concepts. The ideas are then adapted to fit the elementary school curriculum and the resulting units are used by teachers in regular classrooms. Thus they are tested several times in elementary schools before they are published.

Central to these elementary school programs are current ideas of intellectual development. A child's elementary school years are a period of transition as he continues his exploration of the world begun in infancy, builds the abstractions with which he interprets that world, and develops confidence in his own ideas. Extensive laboratory experiences at this time will enable him to relate scientific concepts to the real world in a meaningful way. As he matures, the continued interplay of interpretations and observations will frequently compel him to revise his ideas about his environment.

The teaching strategy is for the children to explore selected science materials. They are encouraged to investigate, to discuss what they observe, and to ask questions. The SCIS teacher has two functions: to be an observer who listens to the children and notices how well they are progressing in their investigations, and to be a guide who leads the children in seeing the relationship of their findings to the key concepts of science.

The adapted program for visually handicapped children takes a laboratory approach, stressing observation, manipulation of materials, and development of language skills to describe and explain events. Through these activities the visually handicapped child is encouraged to explore his world further and to develop confidence in his own ideas. The specially adapted and designed concrete experiences being developed by the project will give him a base from which to build the abstractions necessary for interpreting the biological and physical science aspects of his environment.

The following examples, one group of activities from the physical and the other from the biological sciences, illustrate how it is possible to adapt activities for visually handicapped children which seem totally dependent on sight.

□ During the SCIS first-level biological science unit, entitled *Organisms*, children are given experience with fish in order to help them further develop their knowledge and understanding of organisms.³ Concepts like birth, death, reproduction, and habitat are introduced in relation to the children's experiences with aquaria and the fish and plants which they find in them. The first part of the unit concentrates heavily on the pupil's observation and description of fish and their properties. Ordinarily the fish, plants, snails, etc., are placed in square, one-gallon plastic containers and the children observe the motion and other behavior of the fish for themselves. To enable the visually handicapped child who cannot see the fish to discover the characteristics and behavior of goldfish more directly, a special aquarium set-up was devised. A second identical plastic, one-gallon aquarium is obtained and holes are drilled

Theoretical background

Laboratory approach

Aquaria in a Biological Science Unit

in the bottom of it. The two aquaria are then placed one in the other so that the water comes up through the holes and fills the second aquarium. The fish is placed in the nested aquaria and the child is taught to tip the second, inner aquarium so that most of the water runs out and the goldfish is trapped in the small amount of water remaining at the bottom. The visually handicapped child can then place his fingers inside and feel the fish's movement, its actual shape, the action of the fins, and even the motion of the fish's gills. He can capture the fish and lift him out of the aquarium so that its size, shape, and other characteristics can be explored more effectively.

Adapted aquarium

Although one might expect the fish to die immediately when removed from water, only one or two fish have been lost and some have survived sessions of as long as 15 minutes out of the water. One of the fish that died was found to have almost no scales left. On being questioned, the six-and-a-half-year-old blind boy who had been working with it explained that he had rubbed it very hard to shine up the gold so that he could see it. He no longer tires to shine his goldfish, but from further work with goldfish, he now has a much better understanding of many of the characteristics of a fish. While sighted children draw pictures of their organisms after observation, the blind child is given a piece of clay from which he can develop his own model of what fish look like.

Examining fish

It is also possible to place plants, snails, filamentous algae, and other organisms in the adapted aquarium so visually handicapped children can have direct experiences with them also. Based on these experiences, the visually handicapped child can not only participate in discussions with his sighted peers about the fish, but can also internalize some of the ideas that others offer during these discussions.

In integrated classes, sighted children often become interested in the adapted materials, and the activities designed for the blind child may be used to benefit the class as a whole. As an exploratory activity in teaching the concept of the food web, sighted children in the classroom observe guppies eating the water flea, *Daphnia*, in their aquaria. Although we tried repeatedly to make these tiny organisms observable to blind children, the *Daphnia* appear to be much too small and delicate for them to feel. A large, plastic model of the water flea was available for the blind child to manipulate, but another more concrete experience was necessary in order to get this important concept across. The goldfish was originally chosen for its size, but it has another important characteristic: it is an animal-eater and thus has the same relationship to the food web as guppies. Now the blind child's aquarium becomes a focal point for all his classmates. Small guppies, which the child can easily identify once he has had experience with the larger fish, are placed inside his aquarium. Soon afterwards, one or more of the guppies disappears. The children develop hypotheses for what might have caused this disappearance and eventually, after experimentation, are able to add goldfish to their classroom food web.

Teaching the concept of the food web

□ Solutions are found and used by the child in all parts of his environment. Many interactions in physical science take place between solutions of various substances. As a child builds a knowledge of solutions and their properties, he extends his knowledge and understanding about matter and its conserva-

**Liquid Solutions in a Physical
Science Unit**

tion. In the third-level SCIS physical science unit, entitled *Subsystems and Variables*, liquid solutions are studied and the definition of a liquid solution is developed by contrasting the appearance and behavior of liquid solutions with liquid nonsolutions.

The most useful operational criterion with which to identify liquid solutions is that they are clear (like syrup or salt water) and not cloudy or milky (like lemonade or milk). Solutions may be colored (as are coffee and apple cider), but they are clear. The cloudy appearance of a nonsolution is caused by the presence of undissolved particles or droplets that are large enough to interfere with the transmission of light through the liquid.

For sighted individuals we therefore have a two-part definition: a solution is a mixture that is clear, not cloudy. Is water a solution? Salt water? Milk? Tea? Pure water is not a mixture, hence it is neither a solution nor a nonsolution. Salt water is a clear mixture, hence it is a solution. Milk also is a mixture, but it is a nonsolution because it is not clear. Tea, a colored, clear mixture, is a solution.

If a sighted child is given a system and asked to state whether it is a pure substance, a solution, or a nonsolution, he will first take a close look at it. If it is cloudy, he can say that the system is a nonsolution. If the system is clear, it is either a solution or a pure substance. The seriously visually handicapped child cannot visually decide whether a mixture is clear or cloudy and therefore is not able to use this ordinary method of separating mixtures from liquid solutions. The following adapted teaching program designed by the project provides the child with a nonvisual approach to determining whether or not a mixture behaves like a liquid solution.

First, all mixtures are separated into two groups. One group includes all those mixtures (like sand and water) where there is evidence of a residue or solid material in the liquid. This is determined by feel, the grating or other sound caused by rubbing a popsicle stick over the solid material, or the sound of the solid material hitting the sides of the container as it is shook. All mixtures which give evidence of solid material or residue are classified as nonsolutions and put aside.

The other group of mixtures includes both solutions (like salt and water) and nonsolutions (chalk and water) where the solid material is finely dispersed and cannot be directly detected by the visually handicapped child. These mixtures are filtered and all those which leave no residue on the filter paper are classified as acting like a solution. The others (like starch and water) which leave a residue in the filter paper are not solutions and are classified in the same group as the sand and water. The major limitation of this approach is the fact that some mixtures identified as nonsolutions by this procedure may actually contain solutions as parts (subsystems) of the mixture. For example, when you add both salt and starch to water, or more plain salt than can dissolve in that amount of water, you will, on filtering, get a residue. Each is a nonsolution even though both also contain a salt-water solution.

To help solve this problem, the visually handicapped children are introduced to the technique of letting what comes through the filter paper evapo-

Scientific criteria

Adapted criteria

Distinguishing mixtures, solutions, and nonsolutions

Limitations

Overcoming limitations

rate. If it is just water, little or no residue is left. If it is actually a solution, a great deal of residue remains after evaporation and so the pupils have acquired more information. This work with solutions has proven highly interesting to the visually handicapped elementary school children with whom the program has been tried in its experiemntal version.

These activities follow the children's earlier experiences with the properties of objects and how one finds and describes evidence of interaction between objects. Adaptations, such as using texture instead of color to differentiate between objects and the use of a small motor instead of a light bulb to indicate a complete electric circuit, have been developed and used with success.

Concurrent with the development of the program are the design of evaluation activities. The work involves developing tests specifically for visually handicapped children to determine their intellectual development, the success of the adaptations, and the effectiveness of the program as a whole.

□ The dividends received from Adapting Science Materials for the Blind will extend beyond the blind child's greater familiarity with scientific concepts and processes. It is hoped that the children will show behavioral changes similar to those found with sighted children in the SCIS program: a reliance on evidence, confidence in their own ideas, and a variety and thoroughness in approaching problems. The project also points to new ways in which the work of innovative programs can be adapted and revised and may inspire groups working in other areas of special education.

Goals of Project

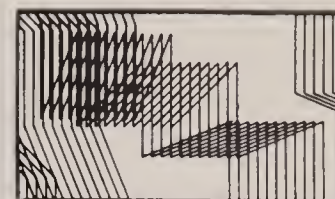
1. The Science Curriculum Improvement Study is funded by the National Science Foundation and headquartered at the Lawrence Hall of Science, University of California, Berkeley.
2. Development of evaluation material is under the direction of Dr. Marcia Linn of the project staff.
3. Development of the life science adaptations is under the direction of Robert Knott of the project staff.

Notes

Teaching Geography to Blind Students—Continued from page 189

5. Hathaway, Winifred and Lowenfeld, Berthold. "Teaching the Visually Handicapped." In *Forty-ninth Yearbook, Part II*. Chicago: National Society for the Study of Education, 1950, p. 146.
6. *Secondary School Curriculum Guide: Social Studies*. Vancouver: Department of Education, Province of British Columbia, 1968, pp. 6-7.
7. Sherman, John C. "Needs and Resources in Maps for the Blind," *New Outlook for the Blind* 59 (1965):130-34.
8. UNESCO. *Source Book for Geography*. London: Longmans, Green and Company, 1965, pp. 7-9.

Answers to Accreditation Questions



National Accreditation Council for Agencies Serving the Blind and Visually Handicapped

Q. We have finished our self-study and are ready to send in the various sections of the Self-Study and Evaluation Guide in which we have marked our own evaluations of what we are doing. What else should we send in besides these sections of the Guide?

A. Along with your properly completed sections of the *Guide* (and any necessary continuation sheets), you should send the following items to the National Accreditation Council:

1. An extract of that part of your agency's or school's charter, articles of incorporation, bylaws, or enabling legislation which contains the statement of the purpose for which your institution was established. (This is not the same as the statement of your "Philosophy of Service and Program Objectives," requested in Section B. 1. of the general *Guide*, and should not be submitted as a substitute for it.)

2. A list or brief description of each of the services your agency provides.

3. If your agency provides services in more than one place in your community or in more than one community, a list of the facilities, their addresses, and the services provided at each.

4. A brief history of your agency. (Prefably one typewritten page.)

5. A copy of your most recent annual report.

6. A copy of your most recent audited financial statement.

7. A copy of your agency's current budget.

8. An organization chart of your agency.

9. A list of the names and titles of administrative and supervisory personnel (this means professional and technical personnel, but not secretarial, clerical, or maintenance personnel, or client employees in workshops).

10. A list of the members of your governing or advisory board.

Note: If your agency is solely a sheltered workshop applying to NAC for accreditation, the above list applies to you also. Some confusion has arisen because workshops that are seeking certification from National Industries for the Blind (rather than NAC accreditation) are requested by NIB to supply more data than this. For accreditation you should supply only the materials requested in your *Self-Study and Evaluation Guide*.

Q. We are finding the bound volume of the Self-Study and Evaluation Guide hard to use as a workbook. Too many people have to use parts of it at the same time. What can we do?

A. Send for the separate sections that you will need. Each *Self-Study and Evaluation Guide* (the general *Guide*, the *Guide for Sheltered Workshops*, and the *Guide for Residential Schools*) comes in easy-to-use sections as well as in single-volume form. Write for the complete NAC order form—all publications and their separate sections are listed there for your convenience in ordering.

Q. Our self-study committee is hung up because we have several questions which the chairman has not gotten around to sending to NAC for answers. How can we start moving ahead?

A. Suggest that your chairman telephone NAC rather than trying to put his questions down in writing. Often a short call can clear up problems that are hard to phrase in a letter. NAC encourages you to call whenever you have questions. Don't delay! The phone number is (212) 683-8581.

Q. Who initiates the agency self-study leading to accreditation?

A. Our experience is that most often the agency administrator initiates the self-study. This is natural. The administrator has the day-to-day responsibility for seeing that quality services are provided. The conscientious administrator will recognize the self-study and accreditation process as powerful tools to help him improve services.

Sometimes the governing board, advisory board, or other policy-making body initiates the idea of conducting a self-study. It is certainly within the province of a board to do so.

Regardless of where the original impetus comes from, the agency self-study is a major step with important implications for any agency's future. For this reason, no self-study should be undertaken without the joint involvement of board and staff.

Q. What is the role of the board or other policy-making or advisory group in a school or agency self-study?

A. Evaluation of program and operations is a basic function of a board. (See Section C-1, Standard 2.10 in NAC's *Self-Study and Evaluation Guide*.) Participation in the agency self-study enables the board to discharge this responsibility in a most satisfying and effective way.

When board members are involved in the planning and on key self-study committees, many benefits result. For one thing, board members become better informed about agency programs and problems. For another, they become better able to interpret the work of the agency because of their deeper personal involvement. In addition, the agency will enjoy the fresh viewpoints and the wide range of expertise that volunteer board members can bring to the self-study.

There are two things that your board definitely should do and that can provide

the basis for extensive board participation in the self-study. These two things are approving the agency's application for accreditation (see item #4 on application form) and formally adopting the agency's "Statement of Philosophy of Service and Program Objectives" which will be used by the agency itself and later by the on-site review team as the point of reference in evaluating your agency's services.

Q. Our Self-Study Committee has been rating some of our programs and I notice that almost all the ratings imply that we

are fully living up to standards. This worries me because I don't think we're that perfect. How can I help the committee to be more realistic?

A. Have you completed your "Statement of Philosophy of Service and Program Objectives"? If so, your committee should use this as a guide in rating your services; that is, to what extent are you actually attaining the objectives you have set forth?

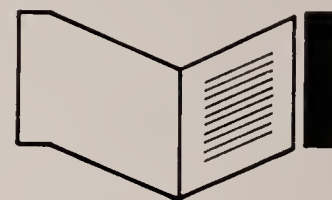
If you have not completed the Statement, we suggest that you concentrate on doing this first. It provides the framework within which you make a realistic

appraisal of how close you come to reaching the goals you have set for your agency.

A further way of helping the committee might be for you to sit in on one of the evaluative sessions. You may thus be able to help committee members make more thoughtful appraisals.

What is your question about accreditation? Send it to the National Accreditation Council, Suite 1406, 79 Madison Avenue, New York, New York 10016. If it is of general interest, we will try to answer it in this column, but you will in any case receive a direct, prompt reply.

Current Literature



Handbook for Teachers of the Visually Handicapped, by Grace D. Napier and Mel W. Weishahn. Editorial Assistants: Amie L. Dennison and Betty D. Womack. 2nd ed. Instructional Materials Reference Center, American Printing House for the Blind (1839 Frankfort Avenue, Louisville, Kentucky 40206). September 1970, 100p. Free to teachers (while supply lasts). A guide designed for the beginning or inexperienced teacher of the visually handicapped. The book contains much explanatory material dealing with reactions, problems, and capabilities of blind children as well as sections on sources of braille, large type, and recorded material.

Rehabilitation Work with the Blind, by Virginia Li Wang and Saul Rogolsky. Cooperative Extension Service, University of Maryland (College Park, Maryland 20740), August 1970, iv + 16p. Publication # MEP 290, 20c. Instructional booklet to aid those working with newly blinded homemakers. The Appendix contains teaching outlines for food preparation, meal planning, home management, etc.

Sam Genensky's Marvelous Seeing Machine, by George A. W. Boehm. *Reader's Digest* (Reader's Digest Association, Inc., Pleasantville, New York 10570), Vol. 98, January 1971, pp. 27-28+. Story of the development of Randsight, an enlarging device which has enabled a number of nearly sightless people to read and write again. Useful features are tuning for contrast and brightness and reversal of black and white. Initial price of the commercial version (trade name is Magnivision) is \$3,295.

A Team Approach to Teaching Blind Homemakers: Home Economist as a Member of the Health Team, by Virginia Li Wang and A. June Bricker. *American Journal of Public Health* (American Journal of Public Health Association, Inc., 1740 Broadway, New York, New York 10019), Vol. 60, No. 10, October 1970, pp. 1910-15. Report on the Workshop for Rehabilitation Teachers of the Blind and Extension Home Economists held by the Maryland Cooperative Extension Service at the Good Samaritan Hospital in Baltimore, March 1969.

Tracing and Training of Blind and Partially Sighted Patients in Institutions for the Mentally Retarded, by Mette Warburg. *Danish Medical Bulletin* (47 Prags Blvd., Copenhagen S., Denmark), Vol. 17, No. 5, May 1970, pp. 148-52. Text of a paper read to the Eleventh World Congress of the International Society for Rehabilitation of the Disabled, Dublin, 1969.

A Look at a College Orientation Program for the Visually Impaired, by Clyde R. Smith. *Education for the Visually Handicapped* (1839 Frankfort Avenue, Louisville, Kentucky 40206), Vol. 2, No. 4, December 1970, pp. 116-20. Report on the sixth college preparatory program held at the Rehabilitation Center of the Arkansas Enterprises for the Blind in Little Rock in 1968.

Retardation Among Blind Children, by Sally Rogow. *Education of the Visually Handicapped* (see address above), Vol. 2, No. 4, December 1970, pp. 107-11. The author discusses ways in which blindness can interfere with perceptual and cognitive learning and possibly result in functional retardation. —M.M.R.

Special Guest Editorial

Harold G. Roberts, author of the following, is associate director for service, American Foundation for the Blind.

Recently, a victory blow was struck for blind persons throughout the United States. The *Federal Register* dated December 29, 1970, described a reorganization of the U.S. Rehabilitation Services Administration in which the Division of Services to the Blind and Visually Handicapped was officially submerged in the Division of Special Populations, a new umbrella unit. This down-grading served as a catalyst for an official, united protest action by national organizations of and for the blind (the American Association of Workers for the Blind, American Council of the Blind, American Foundation for the Blind, Association for Education of the Visually

Handicapped, National Council of Directors of State Agencies for the Blind, National Federation of the Blind, and National Industries for the Blind).

As a result of two meetings with John D. Twiname, administrator of the U.S. Social and Rehabilitation Service, and Dr. Edward Newman, commissioner of RSA, this decision was reversed and it was agreed that: 1) a new Office for the Blind and Visually Handicapped with full divisional status within RSA was to be created; 2) the head of the new office was to be designated "Special Assistant to the Administrator of SRS" so that the needs of blind persons will be represented in other SRS programs such as Medicaid, Community Services, etc.; and 3) an advisory group of leaders and consumers representing blind and visually handi-

capped persons was to be established. These gains will contribute significantly to the future expansion of specialized services and insure appropriate communication between the federal establishment and our specialized field of service.

This experience contains several valuable lessons for all of us, including the following: 1) Mr. Twiname and Dr. Newman have demonstrated their interest and responsiveness to the needs of blind persons and for this they have earned our respect and support; 2) the categorical approach to securing gains for blind persons is alive and well; and 3) the organizations of and for the blind are a powerful force for constructive change when they cooperate and present a united front. All of these augur well for the future of specialized services for the blind.

News in Brief

■ The American Foundation for the Blind will observe its 50th anniversary of service in the field of work for the blind this fall by sponsoring a week-long series of events at the Plaza Hotel in New York City. A closed, three-day international conference on technology and blindness, entitled "Science and Blindness: Retrospective and Prospective," will be held October 25-27. Outstanding scientists from around the world will be attending at the invitation of AFB's Research Department.

An anniversary banquet, at which Dr. Jerome B. Wiesner, president of the Massachusetts Institute of Technology, will be the speaker, is to be held the evening of October 27. AFB's Migel Medal awards and other citations for exceptional service will be presented at the banquet.

Attitudes toward blindness will be the subject of a symposium to be held October 28-29. The sessions, which will be limited to approximately 120 participants, is being planned and coordinated by AFB's Program Planning Department.

■ The Rev. Thomas J. Carroll, 61, a leading figure in work for the blind for more than 30 years, died in Boston on April 24. He was, at the time of his death, director of professional policy and development at the Catholic Guild for the Blind, Newton, Massachusetts.

Father Carroll entered work for the blind in 1938 as assistant director of the Catholic Guild. He served as executive director of

the Guild from 1946 to 1970. He was founder and director of St. Paul's Rehabilitation Center for the Blind, the first civilian facility offering total rehabilitation for the newly blinded (1954), the American Center for Research in Blindness and Rehabilitation (1963), and St. Raphael's Geriatric Adjustment Center (1965).

Internationally known for his outstanding service in the field, Father Carroll was active on a host of local, state, national, and international committees, boards, and consultant posts, including the National Society for the Prevention of Blindness, the American Association of Workers for the Blind, the American Foundation for the Blind, the National Advisory Committee on Neurological Diseases and Blindness, the Royal Society for the Promotion



of Health, and the World Commission on Research in Rehabilitation. Since 1945, he served as national chaplain of the Blinded Veterans Association. He received numerous awards for his work, including the field's highest honor, the Migel Medal (1957).

Father Carroll published many papers and articles, and an outstanding book, *Blindness: What It Is, What It Does, and How to Live With It*, which has been translated into three foreign languages.

Born in Boston, Father Carroll graduated from Holy Cross University and was ordained at St. John's Seminary, Brighton, Massachusetts, in 1938. In World War II, he worked extensively with servicemen who had lost their sight. He is survived by six sisters.

■ The August 22-27 meeting at the Perkins School is the International Conference of Educators of the *Deaf-Blind*, not "of Blind Youth" as announced in the May issue of the *New Outlook*.

■ Sympathetic ophthalmia, the condition in which severe injury to one eye causes, in some persons, a serious inflammation to develop in the uninjured eye, has in recent years been attributed to autoimmunity, the body's allergic reaction to its own tissue. Dr. Vernon G. Wong, clinical director of the National Eye Institute, and his associates, Richard R. Anderson and Dr. Paul J. O'Brien, have obtained experimental evidence supporting this hypothesis. In presenting their findings to the 23rd Annual Wills Eye Hospital Clinical Conference in Philadelphia early this year, Dr. Wong indicated that autoimmunity plays an important role in sympathetic ophthalmia, although it may not be the sole cause of this condition.

■ A new list of publications has been issued by the American Vocational Association (1510 H Street, N.W., Washington, D.C. 20005). It includes full descriptions of AVA pamphlets and monographs on vocational education, counseling, programs, and research. The list is available on request from AVA.

■ The National Institute of Neurological Diseases and Stroke has awarded five contracts for research related to a visual prosthesis involving direct stimulation of the brain with signals from a miniature television camera. The research is aimed at determining the best way to stimulate the brain, whether prolonged continuous electrical stimulation will damage the brain, and tolerance of the implant materials. An NINDS committee will review the findings.

■ According to the Swedish Information Service, the Museum of National Antiquities in Stockholm has arranged a special exhibit of prehistoric and medieval artifacts entitled "History Through the Fingertips." Utilizing a series of suitcase-sized boxes containing stone and metal axes and medieval household objects, plus a synchronized tape recording, blind persons may examine each item tactually while being supplied aurally with historical data on it. The exhibition, after a very successful try-out in the capital, has begun a tour of the Swedish provinces.

■ In March, the national program of free library service to blind and other physically handicapped persons reached its 40th year. Directed by the Division for the Blind and Physically Handicapped of the Library of Congress, this service dates back to the passage, in 1931, of the Pratt-Smoot Act. Federal, state, and local governments, and religious, volunteer, and community-service organizations cooperate in the program, with more than 200,000 individual readers now being served through a network of 48 regional libraries.

■ As a service for blind persons, the Social Security Administration now accepts inquiries written in braille and will send replies in braille when requested to do so. Braille letters received at the Social Security Headquarters in Baltimore are transcribed into typewritten form by Martha Seabrooks, a blind typist who has worked for the

agency since 1965. Braille replies are typed by Miss Seabrooks on a braille electric typewriter. To ensure that inquiries in braille are promptly transcribed, envelopes should be addressed to the Social Security Administration, Baltimore, Maryland 21235, *Attention: Secretarial Services Unit*.

■ According to the Novosti Press Agency of the Soviet Union, typhlography, the teaching of tactual drawing to blind students, continues to play an important role in the education of the blind in Russia. The development of typhlography, begun 40 years ago by Nikolai Semevsky, has been carried on at a national research center for methodological typhlography. Now a pedagogical science, it is taught in every school for the blind and not a single textbook for the blind is produced without tactual illustrations.

Appointments

■ National Advisory Eye Council, National Eye Institute, new members: **Mrs. Helen H. Gilbert**, Washington, D.C., chairman of the board of trustees, Radcliffe College; **Dr. Vernon Benjamin Mountcastle, Jr.**, Johns Hopkins University School of Medicine.

■ National Health Council (by election): president, **Richard P. McGrail**, deputy executive vice president, American Cancer Society; president-elect, **Walter J. McNerney**, president, Blue Cross Association.

Awards

■ National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, 1971 award for outstanding leadership in improving standards of service to blind people nationwide: **James F. Garrett**, assistant administrator of research, demonstrations, and training, U.S. Social and Rehabilitation Service.

■ W. F. Faulkes Award for 1970 (National Rehabilitation Association): **Dr. Herbert Rusalem**, assistant director,

Research and Demonstration Center for the Education of Handicapped Children, Teachers College, Columbia University, New York City.

■ **Leslie Dana Gold Medal Award** (St. Louis Society for the Blind): **Rev. Thomas J. Carroll**, director of professional policy and development, Catholic Guild for the Blind, Newton, Massachusetts.

Coming Events

June 7-9 24th Annual Conference on Aging, Institute of Gerontology, University of Michigan, Ann Arbor.

June 20-26 American Library Association, Annual Convention, Dallas.

June 22-23 American Diabetes Association, 31st Annual Meeting, San Francisco.

June 23-26 American Optometric Association, 74th Annual Congress, Houston.

June 27-July 2 American Physical Therapy Association, Annual Conference, Boston.

June 27-July 2 National Education Association, Annual Convention, Detroit.

July 5-9 National Federation of the Blind, National Convention, Houston.

July 18-21 American Association of Workers for the Blind, Biennial Meeting, Richmond, Virginia.

July 25-30 International Association of Applied Psychology, 17th International Congress, Liege, Belgium.

August 4-8 Blinded Veterans Association, 26th National Convention, Miami Beach.

August 22-27 International Conference of Educators of the Deaf-Blind, Perkins School for the Blind, Watertown, Massachusetts.

August 23-26 American Hospital Association, Annual Convention, Chicago.

October 11-13 National Rehabilitation Association, Annual Conference, Chicago.

October 12-13 American Association for World Health, 19th Annual Meeting, Minneapolis.

October 25-29 50th Anniversary Celebration, American Foundation for the Blind, New York City.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

A Reminder

Readers are reminded that the *New Outlook for the Blind* is not published during the months of July and August. Publication will be resumed with the September issue.

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Persons or agencies interested in the Sensi-Quik cane are invited to contact



Along with the Sensi-Quik cane, the Go-Sees provide an instructional manual entitled "Touch and an Occasional Tap." It is available on disk and tape and in braille and ink-print. In addition to stating the philosophy of the Go-Sees, the manual teaches the vocabulary of "cane talk words" that enable the traveler to respond quickly and deftly to the messages his cane picks up from the environment. The manual is available on loan from the address below.

Franklin S. Clark
The Go-Sees
166 East 92nd Street
New York, N.Y. 10028

THE NEW Outlook FOR THE BLIND

September 1971 Volume 65 Number 7

Articles

- 201 Aging and Blindness: A Public Symposium
 Patricia Scherf Smith
- 204 Visual Function in Geriatric Eye Disease
 Eleanor E. Faye, M.D.
- 209 Progress in the Prevention of Blindness Among the Aged
 Abraham L. Kornzweig, M.D.
- 213 Vision Screening of the Aged
 Howard H. Hanson
- 215 Future Directions of Government Programs
 Barbara C. Coughlan
- 217 The Challenge of Aging
 Frederick C. Swartz, M.D.
- 220 "Fringe Benefits" of Accreditation for Residential Schools
 Geraldine T. Scholl, Ph.D.
- 224 Learning Through Listening: A Review of the Relevant Factors
 Roy J. Brothers, Ed.D.

Departments

- 232 Editorial Notes
 Milton D. Graham, Ph.D.
- 233 Answers to Accreditation Questions
- 234 Current Literature
 Mary Maie Richardson
- 236 News in Brief

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Aging and Blindness: A Public Symposium

Until the late 1960's, little attention was paid to a very special group of people—those who are both aged and functionally blind. They number at the most perhaps a half million out of some 20 million persons past the age of 65.

Interest in the needs of the aged increased rapidly through the late 'fifties and early 'sixties, until it peaked with the passage of Medicare. Only after that major breakthrough did there seem to be time to devote to the special groups within the general aged population. Thus in the late 'sixties, attention turned to the visually handicapped older person, and work for the blind began seriously to expand—to establish programs for the elderly blind, and then to share these ideas and programs by reporting them at meetings and in journals.

□ Among the developments was the establishment in 1969 of a National Task Force on Geriatric Blindness to advise the American Foundation for the Blind on how it could assist in the development of programs for elderly visually handicapped persons scattered across the country.

Since 1969, the Task Force has met three times, most recently last April in Los Angeles. From its recommendations have grown several projects, among them a series of demonstrations in New York State to integrate blind persons into ongoing programs for the elderly; the production of a handbook on aging and blindness which will be published this fall; the assumption by AFB of the role of advocate on behalf of the aging blind to related groups in social welfare, medicine, and government. The advocacy role has been most clearly carried out in relation to the forthcoming White House Conference on Aging, where the AFB, the Task Force, the National Council on Aging, and local agencies for the blind and aging have urged the inclusion of blindness on the agenda.

An even more specific result of the Task Force is the report on page 213 by Howard H. Hanson, director of the South Dakota State Services to the Visually Impaired, Pierre. According to Mr. Hanson, the idea for the screening program came to him as he returned home by plane from a Task Force meeting.

Meanwhile, other groups, local and national, have begun new programs or expanded old ones. The *New Outlook for the Blind* itself decided in 1968 that it must begin to publish more articles on aging. It has made the subject a priority ever since, devoting a whole issue to the subject in June 1969, running various individual articles, and reporting new developments in its new columns.

PATRICIA SCHERF SMITH

Mrs. Smith is managing editor of the New Outlook for the Blind.

National Task Force on Geriatric Blindness

National Task Force projects

□ Now once again, the *New Outlook* devotes a considerable part of an issue to the subject. The following articles are based on speeches given at a symposium held April 23 in Los Angeles under the auspices of the Los Angeles Regional Committee of the American Foundation for the Blind and the National Task Force.

This is not a proceedings of the meeting in the regular sense, but a selection of material the editors believe to be of the greatest interest to our diverse readers. Single copies of the complete proceedings are available free by writing *Aging Proceedings*, American Foundation for the Blind, 15 West 16th Street, New York, New York 10011.

The articles are heavy on medicine, causes of blindness, and prevention, a departure from the *New Outlook's* usual content, which tries to avoid these subjects since they are not of primary concern to agencies or workers for the blind. However, the visual problems of aging blind persons are typically those that have a high relationship to medical prevention and/or treatment—problems often not understood by agency personnel who are helping them to cope with their lives and living conditions. For this reason, the editors felt that basic descriptions of causes and treatment of visual problems and general comments about medical and health care would be of use to our readers, as would a few observations about the Los Angeles symposium, which drew a multi-disciplinary audience.

Throughout the meeting, the speakers reiterated the point that the problems of elderly blind people are exactly the same as those of all elderly persons, compounded, of course, by the special requirements occasioned by severe visual handicap.

□ William C. Fitch, executive director, National Council on Aging, commenting on a survey of a million and a half elderly persons conducted last year preliminary to the White House Conference on Aging, said, "Blind persons have the same kinds of problems as others. First, there is income; then, health, which is something separate from the handicap of blindness or other handicaps. There is the problem of housing. There is a problem of transportation."

□ These problems become especially acute among the poor and among the minority groups, and at the meeting special attention was given to the Spanish-surnamed minority by Martin Ortiz, director of the Center of Mexican American Affairs, Whittier College, Whittier, California.

Pointing out first that there are some 12 million Spanish-surnamed Americans, most of them of Mexican descent, he went on to say that the 1970 census findings reveal the familiar statistics of the urban poor: educational deprivation, high unemployment, social dependence, and "the ever-present barrier of misunderstanding between the Mexican-American and the Anglo community." Moving to the specific problem of the elderly blind Mexican-American, Mr. Ortiz termed him a "member of the 'lost generation' inasmuch as he has not generally been in the mainstream of attention by public and private social agencies and

A departure for the New Outlook

William C. Fitch

Martin Ortiz

A new "lost generation"

educational institutions” and because of a lack of communication between Spanish and English-speaking communities.

Mr. Ortiz said that in checking with agencies for the blind in the Southwest, he found “an astonishing lack of data and information on blind persons of Spanish-speaking background.” He urged increased interest in this group, stressing the need to make services more accessible to them, in such basic ways as simply translating English materials into Spanish.

Making services accessible to elderly blind persons is one problem; another is finding the elderly blind persons to tell about services. Various studies have shown that there are a large number of “hidden blind persons.”

□ One suggestion for searching out such people was made by Martin J. McNamara, former general counsel to the National Council on Senior Citizens, who described one of the Council’s national demonstration projects called Senior AIDES, the name being an acronym for Alert, Industrious, Dedicated, Energetic Service. It is designed to show the usefulness of the elderly poor (individuals 55 years of age or over, retired or unemployed, with very low incomes), who wish to and are able to work, to the communities and to their public and private nonprofit agencies which have need for additional workers to improve and expand their services but who are financially unable to employ this help.

Martin J. McNamara

Mr. McNamara noted that for many years, interested groups have been trying to convince the Congress that the federal government must provide a national program to help the elderly poor—willing, anxious, and able to work, but who have been forced to retire or to live on inadequate incomes or who are unable to find jobs because of their age. The Senior AIDES program is a demonstration of this idea.

Aims of AIDES

He suggested that agencies for the blind and/or aged could well use Senior AIDES in a variety of capacities, including searching out those elderly visually handicapped persons who need, but who do not know about, services for them.

□ The speakers and audience, all talking of statistics, services, needs, and problems, constantly returned to the theme that the aging blind group is comprised of people—individuals, with their own needs and wants and feelings. This was perhaps best summed up by Miss Ollie Randall, consultant on aging to the Ford Foundation and a longtime worker in the field of aging, who, during a discussion on case reporting and statistics, commented, “When I was a young student, a professor looked at me and said, ‘Miss Randall, do you know those statistics bleed?’ ” And so the goal of the Los Angeles meeting, of the Task Force, of the *New Outlook*, and all those working to help elderly blind and visually handicapped people.

Real People, Not Statistics Only

Visual Function in Geriatric Eye Disease

The four major eye diseases associated with the elderly—cataract, macular degeneration, glaucoma, and diabetic retinopathy—are not peculiar to the aging eye. The first three can be present at birth or occur at any time throughout the life of the individual, although the frequency of occurrence does increase with age. Diabetes can begin to affect the eyes about 20 years after its initial onset. The elderly person affected by a decrease in visual function, however, is also likely to be suffering from other concomitants of physical aging (arthritis; arteriosclerotic heart disease; mental changes affecting mobility, self-sufficiency, and independent living) and from the social disadvantages of aging (loss of income, poor living standards, neglect).

Good general health and improved diet and living conditions are important in increasing the level of resistance to all disease, including eye disease. Periodic eye examinations are essential to early detection and prevention, particularly in light of the significant developments in medical and surgical treatment over the last three years. The goals of work with the visually handicapped person, however, are still to find him sooner so that he can be treated and to provide better facilities and services for those who are beyond remedial help.

□ Cataract, macular degeneration, glaucoma, and diabetes involve different parts of the eye and, therefore, affect visual functioning in different ways. Cataract is confined to the lens of the eye and involves a clouding or opacification of this usually crystal clear structure. Macular degeneration is a disease of the macula of the retina, the area of acute visual discrimination (central visual acuity), and involves a degenerative process or a hemorrhage. The side vision remains intact. Glaucoma, a disease involving the fluid dynamics of the eye (the inflow and outflow of aqueous humor), results in a gradual increase of fluid pressure which damages the optic nerve and causes a loss of part, or all, of peripheral vision, followed by a decrease in central vision. Diabetes, a systemic disease affecting blood vessels throughout the body, will in some cases also affect those in the retina. Repeated hemorrhaging from these vessels will eventually cause blindness through the formation of scar tissue which no longer has a visual function or by detachment of the retina by scar tissue that is too dense to respond to surgery. The following, more detailed discussion of each of these diseases includes information on their detection, their effects on visual functioning in daily life, their treatment, and the correction of the resulting low vision through the use of optical aids.

□ Detection of a cataract that is uncomplicated by the presence of other diseases is not difficult in an alert person who tends to go to the doctor

ELEANOR E. FAYE, M.D.

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Early detection and prevention

The Four Major Eye Diseases of the Elderly

Cataract

with visual complaints. A cataract can be seen by shining an examining light through the dilated pupil. Its type and location can be seen through a special binocular magnifying lens, the slit-lamp. The visual function of the person will vary according to the location of the opacity in the lens of the eye. For example, if the opacity is generalized, the haze over the vision will be constant both indoors and out and may be somewhat worse in bright light. If the opacity is in the front layers of the lens, the person will complain principally of "glare," especially outdoors or in intense light (which brings the pupil down over the opacity and cuts down the vision). That person may function well in the house or in dim light, but be "blind" outdoors. If the center or nucleus of the lens is opaque, there will be a constant haze over the vision, although if the light is average or dim, the person may continue to function well in spite of his complaint that he is looking through a "dirty window." Those whose lens pathology is confined to the back layers of the lens will have good distance vision, but will be unable to read well because the focal point for reading will coincide with the opacity. Cataracts which occur as a secondary complication in other eye diseases and add another dimension to management are discussed below.

Visual functioning with cataracts

The measured visual acuity of a person with cataracts may range from 20/40 on down to 10/200 or less. Functioning, which may have no relationship to acuity, is the key to the timing of surgery when the lens is not mature. An older person with a visual acuity of 20/200 and who can still get around and read the newspaper may not need surgery as soon as a working person with 20/60 vision who cannot read ordinary print at his desk.

Although surgery is the ultimate goal in cataract treatment, it is not necessary as long as the individual is mobile and can do near work. Cataract surgery is successful more than 95 percent of the time with modern techniques such as wound incision, new types of suturing, and removal of the lens with a cryo (freezing) probe or by emulsification and suction.

Cataract surgery

Post-operative vision is dependent on the normality of the retina and on the ability of the patient to adjust to glasses or contact lenses. Older persons can adjust to contact lens wear, although much time, patience, and encouragement may be required. The vision, although clear, is magnified; the field of vision is reduced when glasses are used, but normal with contact lenses. If there is pre-existing retinal damage, visual restoration may still be possible in some cases through the use of near vision reading aids which magnify print and telescopic lenses for distance. If, for some other medical reason, cataract surgery cannot be performed, restoration of at least the ability to read through the use of low vision corrections is still important, especially for the elderly person. Too often, case-finding for low vision correction is overlooked in homes for the aging because the old person tends to accept the deterioration of his vision as "inevitable." Instead of being helped to use his visual sense to help him remain mentally alert, he becomes withdrawn and senile.

Post-operative vision and optical aids

Cataract patients may also need tinted lenses to help them tolerate the glare, even indoors or while watching television. As a rule, a pair of clip-on, flip-up polaroid plastic lenses (gray tints of 40 to 60 percent absorp-

Tinted lenses

tion are most acceptable) may be used either down over their regular glasses or in the flipped-up position as a sun-shade. Lens coatings may also be applied by an optician to the patient's current pair of glasses.

□ Early detection of macular degeneration is usually the rule, especially if the elderly person is alert and has many interests. As functional acuity lessens, he will soon seek medical eye care. Those not as alert or somewhat apathetic, however, may not act. Fortunately, vision screening programs will usually detect such a problem, for not only does central visual acuity fall (to 20/100, 20/200, or 20/400), but reading vision is noticeably impaired.

Functionally, adjustments in daily living may not be difficult if the degeneration of the macular area is gradual. The person is able to travel alone because only a small, central area of the vision becomes blurred, while the side or traveling vision remains intact. By sitting close to the television to see details, by holding a large print book or newspaper close to the eyes, by using a magnifying glass, and by other similar means, the techniques of daily living are modified by the older person. In rural areas, he may often continue to drive safely in familiar surroundings and with good light because of the importance of this activity in maintaining his independence. If, on the other hand, the loss of vision is sudden (as a result of hemorrhage rather than degeneration), the patient may be precipitated into a crisis. Other systemic diseases, such as diabetes, anemia, and high blood pressure, must be ruled out in this acute loss. A cataract may complicate the visual loss resulting from macular degeneration. Although restoration of normal vision is impossible if the macular area of the retina has deteriorated, the cataract can be removed if it has become very dense. Some return of peripheral vision can be promised, especially if the patient can learn to use contact lenses.

Treatment of some cases of macular hemorrhage and of macular breaks that allow leakage of fluid under the retina has been greatly advanced by the use of a new detection method (an intravenous injection of a fluorescent dye which reveals the area of leakage which can be localized on a photograph). An argon laser beam can then be used to treat the leaking area to prevent further damage to the macula. Other cases are given supportive treatment with special diets, vitamins, and anti-cholesterol medication.

Low vision lenses are particularly effective in cases of macular degeneration. Since over 50 percent of all visually handicapped people over 65 years of age have macular degeneration,¹ early detection is important for prompt medical treatment and prescription of low vision glasses. Older people are particularly successful in the use of hand magnifiers (or stand magnifiers if there is tremor or arthritis present) and lenses mounted in spectacle frames. Through the use of such aids, they can read their own mail and newspapers and can do their personal bookkeeping. Those individuals with an interest in distant objects can use a telescopic device.

□ Of the four major eye diseases, glaucoma, especially in its early stages, continues to elude detection in community health programs. It is sometimes

Macular Degeneration

Visual function

Treating macular degeneration

Use of low vision aids

Glaucoma

called the “silent” disease, because it has no definite symptoms until much irreversible damage has been done. Field loss, blurring, and haloes are late symptoms and only through a combination of tests—measuring eye pressure with a tonometer (or a new method called applanation), examining the optic nerve carefully with an ophthalmoscope, and measuring the central field of vision with a screening device or a tangent screen—can it be diagnosed in its early stages. In addition, eye pressure may appear to be “normal” even while the disease is progressing and only through provocative tests, in which the eye pressure is forced to an abnormally high level under controlled conditions by a medical eye doctor, can it be discovered. Mass screening, therefore, often misses some cases. The visual function of individuals with glaucoma may seem to be normal even in the later stages of the disease and central acuity may remain 20/20 when there has already been extensive destruction of peripheral vision. Only when the person begins to bump into things and to “lose” words on the printed page does he suspect trouble.

In most cases, once glaucoma is identified, it is treatable with drops or pills or a combination of the two. For the rare individual who is allergic or unresponsive to the treatment, surgery to reduce the eye pressure may be required. Since visual loss due to glaucoma is caused by excessive fluid pressure against the optic nerve and subsequent atrophy of that nerve, the treatment is aimed at continuously regulating the flow of aqueous humor, the fluid within the eye, and thereby preventing the build-up of pressure. Elderly people often find the treatment disagreeable. The pills, which are a diuretic, may keep the old person up all night or cause an unpleasant tingling in the extremities which is often incorrectly interpreted as “poor circulation.” The drops, because they constrict the pupil, may “darken” the vision, especially if a cataract is present as well. The patient may say that he saw better before treatment and stop the medication except for a few days before a visit to the doctor. Inadequate instructions and explanations may also result in the patient not taking his medication faithfully. When glaucoma patients also have cataracts and when the lens opacity interferes with the transmission of light through the pupil, cataract surgery should be performed. The watchword for glaucoma, however, remains early detection and faithful adherence to medical treatment.

Optical help for advanced cases of glaucoma is difficult because the field of vision is too small to appreciate a magnified image. Two aids that may be useful in reading are a plus 11 diopter hand lens (that is, with a magnification of about 2½ or 3 times) held over the print at some distance from the eyes or a closed-circuit television system which can enlarge the image farther from the eye.² This recent breakthrough in electronic optical aids will be of use to many visually handicapped people who can read print that is enlarged on the screen of the television monitor.

□ Case finding of retinal pathology in diabetics is not usually a problem since most of them are, as a rule, under medical care and are referred for medical eye care promptly if there are changes in vision. Many infantile and juvenile diabetics classically develop hemorrhagic retinal disease in their twenties and early thirties in spite of adequate control. Retinal changes

Treating glaucoma

Low vision aids

Diabetic Retinopathy

also occur in older diabetics but are not usually as severe and often involve so-called "hard exudates" which do not cause as much variation in vision. Progressive visual loss more often occurs with hemorrhagic or proliferative retinal disease when there are repeated hemorrhages into the vitreous humor as well as into the retina itself. Healing produces scar tissue and, if hemorrhaging is repeated often enough, the visual function is destroyed—the retina becoming shrunken, detached, and completely nonfunctional in the final stages. Visual function in the diabetic with proliferative retinopathy is quite variable. If the vitreous cavity fills with blood, the person may be "blind" for one to three months and then regain his vision. Untreated, the condition eventually leads to very poor vision or total blindness.

With early case finding and the argon laser treatment (used in conjunction with fluorescein dye to detect areas of leakage or hemorrhage), the breaks can be sealed off and the recurrence of hemorrhaging controlled, stopping or retarding the formation of scar tissue. Complete remission is not always possible, but the process can often be slowed. Cataracts are a frequent companion of diabetes mellitus, usually forming in the back layers of the lens. If the retina retains visual function and hemorrhages can be treated, a standard cataract extraction can produce some improvement in vision. Good medical control is very important for every diabetic: diet, exercise, weight control, and faithful adherence to correct medication.

Optical aids for a diabetic whose condition is under good control and stable (not hemorrhaging) are the same as for anyone with a retinal condition, that is, hand or stand magnifier, spectacles, or a telescopic device. When instability and variability are present, inexpensive hand magnifiers are used. Once the condition is stable, more specialized aids may be prescribed.³ Although the emphasis in a low vision center is on the maximum use of remaining vision, no matter how slight it is, the visually handicapped diabetic must often be prepared to function occasionally as a blind person. During times when a vitreous hemorrhage has obscured vision, mobility training, for example, may be of real use.

□ As older people become visually impaired, the aging process itself becomes more of a problem. If they live alone and are left to their own devices, they may not seek help. Much, however, can be done by a community which is aware of the importance of finding these individuals in the early stages of their disease. Once discovered, they can be assisted in retaining their ability to read, to do close work, and to get around independently. Through the use of the many new methods of treatment and more sophisticated optical aids, most older people with a visual impairment can enjoy the restoration of at least a part of their vision and can be helped to continue functioning independently as long as possible.

Treatment

Low vision aids

Summary

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Progress in the Prevention of Blindness Among the Aged

The problem of the ophthalmologist with regard to blindness is unquestionably prevention, with most, if not all, of our efforts being directed toward this goal. In a certain sense, blindness is an indication of failure, and it should act as a spur to greater efforts toward prevention.

Much has been done in the past by medical men and societies to prevent such blindness as is preventable. Trachoma, a worldwide affliction which can cause much visual disability, discomfort, and blindness is now preventable through the improvement of local hygiene and the use of new antibiotic drugs. The disease is now limited to underdeveloped countries in tropical and subtropical climates and to poverty-stricken areas; national and international societies are trying to reach these people with modern therapies. In the United States, trachoma is practically limited to Indian reservations in the Southwest.

□ The treatment of cataract, a universal condition responsible for much blindness in the past, and still with us today, has improved immeasurably since the days of Susruta, who performed the operation of couching a cataract in India 2000 years before Christ. Today, the medical removal of cataract is successful in over 95 percent of the cases because of refinements in instruments, techniques, anesthesia, and drugs. The problem of preventing cataracts is still being investigated, but at present it has not been solved; it may never be completely solved since it is considered by many to be a concomitant of the aging process. Indeed, if one lives long enough, he will probably develop cataract formation.

Preventable accidents and injuries to the eyes have caused much blindness. In this field, the educational programs of many organizations on the local, state, and national level have been most helpful. Prominent among these have been the National Society for Prevention of Blindness, the American Foundation for the Blind, Lions Clubs, industrial organizations, medical societies, and state and federal compensation groups. This is especially true in industries where protective unbreakable glasses are required in hazardous occupations. Recently, ophthalmologists, and specifically Dr. Milo Fritz in Anchorage, Alaska,

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Cataract

Accidents and injuries

were instrumental in promoting the first state law requiring gradual substitution of unbreakable glasses and non-inflammable frames for all persons who have to wear glasses. Massachusetts has followed Alaska's example and a similar measure has been introduced into the U.S. Congress. Many states have outlawed fireworks and the use of air rifles by children and for sport. This is all to the good, but educational campaigns and preventive legislation must still continue unabated as long as people use darts as playthings and exposure to flying objects in industry and sports continue to be hazards.

□ Glaucoma, a frequent cause of blindness throughout the world, is under much scrutiny and investigation. Progress has been made in this field since Albrecht Von Graefe performed the first iridectomy in 1856. The drugs pilocarpine and physostigmine were first discovered to be helpful in 1856 and 1857. A major advance in diagnosis and treatment was the separation of primary glaucoma into two categories, narrow angle and wide angle. The narrow angle type, which causes the acute congestive attack of glaucoma, is now readily treated by a simple peripheral iridectomy. This procedure converts a narrow angle into a normal angle and, in this way, prevents any future attacks. Furthermore, the operation is now being advocated as a preventive procedure in the fellow eye of a patient who has had an attack of congestive glaucoma in one eye. The wide angle type of glaucoma, which is responsible for the chronic form of the disease, is more difficult to find, especially before it has progressed to loss of vision. Early diagnosis, therefore, has been the objective of many educational campaigns and screening efforts throughout the nation and in many foreign countries. Such campaigns have to be continued as new generations of people reach the critical ages where this condition becomes more manifest, generally over 40 years of age.

The medical profession in its research programs has made many advances in the detection and treatment of glaucoma. The subject is too large for a report such as this, but a few such advances can be mentioned. It has been shown that members of the family of a glaucoma patient are more susceptible to the disease than other persons in the same age group. Such potential cases may be detected by instilling a drop of cortisone solution in one eye of the suspected case, using the other eye as a control. After about 4 weeks the potential case will show an increase of pressure in the tested eye as compared to the control. Such an increase in pressure will subside as soon as the cortisone drops are stopped, but the potential case it examined regularly for several years to detect the onset of the disease. The water drinking test is another provocative procedure in which the suspected individual drinks a pint to a quart of water and is then kept in a dark room for 30 to 60 minutes. A significant increase in pressure of six mm. of mercury with the Schiotz tonometer or the applanation tonometer would indicate that the patient is a potential glaucoma case.

New drugs have helped in the treatment of chronic, open angle glau-

Glaucoma

Detection and treatment of glaucoma

Drugs

coma. Carbonic anhydrase inhibitors, which are taken internally and which diminish the amount of aqueous entering the eye, are helpful in controlling the increased intraocular pressure. Local eye drops, such as epinephrin bitartrate, have a similar effect. The combined use of local eye drops and drugs taken internally have been so effective in controlling the increased intraocular pressure that eye surgery for this condition is required much less frequently than heretofore. The patient has to be watched and tested periodically, however, to determine the effectiveness of such a therapeutic regimen.

Recently, it has been shown that the removal of a cataract in a patient who has both cataracts and glaucoma will cure both conditions in a large number of cases. This is particularly true in the aged in whom the combined condition is frequently present. This phenomenon, which was suspected for a long time, was documented as recently as October 1970, at the annual meeting of the American Academy of Ophthalmology and Otolaryngology. At present, a survey of all the cataract operations over the past 10 years at the Jewish Home and Hospital for the Aged in New York City is being conducted to determine how many of the patients with cataract and glaucoma were helped simply by the removal of the cataract.

Cataract and glaucoma

□ In the last few years, the number of elderly persons who have lost vision and in many cases become totally blind as a result of prolonged diabetes mellitus, has increased markedly. It is now, in fact, the most common cause of blindness resulting from a metabolic disease, particularly among the aged. This increase stems from the fact that many more diabetic patients are now living longer because of earlier diagnosis and better control. Diabetic retinopathy begins with the formation of a small dilatation of a capillary, called a microaneurism. Blood and serum seep out of the involved capillaries and form exudates and hemorrhages, with the posterior pole and the macular area being most frequently involved. These hemorrhages may be so severe that the vitreous cavity is completely filled, blocking vision completely.

Diabetic Retinopathy

There have been some promising new developments in the treatment of this condition, the most radical being discovered accidentally. A pregnant diabetic mother with poor vision due to diabetic retinopathy was delivered of her child. Following delivery, she developed a degeneration of her pituitary gland. The physician taking care of her observed that the retinopathy and her vision began to improve considerably. He reported his findings and immediately numerous diabetic centers concentrated on methods of removing the pituitary gland, by surgery, X-ray, the implantation of radio-active itrium, and cryotherapy. The complications of the pituitary removal require considerable replacement therapy since this is a master gland which controls water metabolism, growth, and corticosteroid and hormonal secretions. There were fatalities resulting from the operation, but a number of cases were helped considerably, especially younger patients with at least one good macula and no kidney disease.

Removing the pituitary gland

The argon laser beam is now being used to treat cases of diabetic retinopathy by obliterating those blood vessels that appear to be responsible for the bleeding. The treatment is localized or widely dispersed depending on the degree of involvement. Many early cases have been helped, late cases only rarely. A still more experimental approach in advanced cases of vitreous hemorrhage is removal of the vitreous through an irrigation needle inserted into the eyeball and then replacement by a clear sterile fluid. The technique is still too new for evaluation, but some previously hopeless cases may be helped, provided the retina is still in good shape and hemorrhages do not recur. All of these methods are helpful to some degree, but the basic causative factors are still unknown aside from the diabetes itself.

Lasers and irrigation

□ This brings me to the condition with which I am personally involved, namely diseases of the macula lutea, a small area in the retina that is hardly more than a millimeter and a half in diameter (about one-sixteenth of an inch). Despite its size, it is the area of central vision (or daylight vision), as opposed to side vision (or night vision), with which one can see great distances, read fine print, sew fine stitches, and perceive color most clearly. It is the area with which one can identify people's features at a distance and recognize one's friends. Yet this area is very vulnerable, especially in the aged. A survey of over 1000 residents at the Jewish Home and Hospital for the Aged showed that one third of those over age 65 had some degree of macular degeneration. This condition increases with age—affecting 24 percent of those between 65 and 80 and 38 percent of those over 80 years of age. Vision is reduced to 20/70 in moderately advanced cases and to 20/200 or less in advanced cases. Fortunately, side vision or peripheral vision is usually maintained, so that these patients are able to get around and take care of themselves, although they complain bitterly about not being able to read, write, sew, or identify their neighbors. It is in this group of patients that low vision aids are often helpful.

Macular Degeneration

The causes of macular degeneration in the aged are to a great extent not known. It is occasionally found at birth or in infancy and adolescence as an inherited or familial condition. Some suspect that the same condition in the aged may also have a genetic basis, an abiotrophy in which the macular area of the eye undergoes a genetically determined degeneration before the rest of the eye or the body begins to deteriorate. Others believe that the circulation to the macular area may diminish as a result of arteriosclerosis. Since the macula is such a vital area and requires a constant flow of blood to provide oxygen and other nutrients, any diminution of the blood supply may have a damaging effect on the percipient elements of the retina.

Causes of macular degeneration

Much imaginative research on this subject is going on throughout the United States—in Los Angeles (at the Eye Research Institute recently established under the sponsorship of the Jules Stein Foundation), San Francisco, Boston, Baltimore, Miami, and New York. In a position paper presented by the American Association of Ophthalmology at

Nationwide research

a recent meeting of the Health Committee of the White House Conference on Aging, it was suggested that a separate agency be set up within the National Eye Institute to direct and support research in the field of macular degeneration, to collect information from all quarters, and to act as a clearing house for information. At present a group of us are studying macular disease in the aged at the Jewish Home and Hospital for the Aged under a grant from the National Eye Institute. Such studies in depth include clinical examination, family histories, physiological studies (especially with fluorescein angiography), and, whenever possible, pathological examination of post-mortem material using light and electron microscopic techniques. In this way a body of knowledge will be accumulated, one which will hopefully help us in preventing or delaying the occurrence of this disabling visual condition in the aged.

□ A final note that holds considerable promise for progress in prevention of blindness in the aged rests with the White House Conference on Aging. At the last meeting of the health committees, the proposal for the establishment of an agency to study macular disease was broadened to include many other conditions. As finally stated, "Among the complex of health needs for the aged, priority should be given to the prevention and treatment of blindness." Such a broad statement of principle, if adopted, and if sufficient financing can then be secured, will mean an increased effort in the prevention of blindness in the aged.

New Priority for Blindness

Vision Screening of the Aged

The project to screen the vision of elderly people in South Dakota, which was begun in September 1969, was set up with the following specific goals: 1) To identify those persons in nursing homes who do not have functional vision and to refer for further evaluation all those whose visual acuity is less than 20/70; 2) To refer those needing additional eye care to the appropriate physicians and to refer those whose eye condition indicates that no improvement is possible to the State Service to the Visually Impaired for social and adjustment services; 3) To insure that the follow-up services (getting the individual to a physician for a more complete eye examination and carrying out whatever recommendations are made for improving visual acuity) are carried out; and 4) To involve volunteers from the local community in the project in order to open an avenue through which the nursing home might be able to develop other voluntary services for their residents, including a regular practice of screening the vision of new arrivals.

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□ In setting up the project, the State Service to the Visually Impaired took responsibility for directing the project. The Lions Sight and Service Foundation accepted the responsibility for the fiscal operation and, in cooperation with the South Dakota Association for the Blind and the South Dakota Optometric Association, provided the necessary applicant funds for a project grant from the Governor's Council on Aging. The project was approved for fiscal years 1969-1970 and 1970-1971, with funds available for staff (including a project coordinator), travel, supplies, and printing.

South Dakota, of course, is a sparsely populated, largely rural state (the largest city has a population of only 70,000). There are 154 licensed nursing homes in the state with a total bed-capacity of 6,615. As of April 1971, we have screened the residents of 90 homes; one nursing home manager refused our request to conduct vision screening. During this period, 75 optometrists and two ophthalmologists have participated in the program. There were 3,574 residents in these homes, of which 996 (27 percent) were not screened—208 were unable, either physically or mentally, to be screened; 201 were unavailable, being on leave, in the hospital, or for some other reason not present; 145 refused to be examined for personal reasons; and 382 were under treatment (according to one of the guidelines established at the beginning of the project, we decided not to examine anyone who had been seen by an ophthalmologist, optometrist, or eye, ear, nose, and throat specialist within the 12 months preceding the screening).

□ A total of 2,578 people have been screened so far and of these, 1,438 were found to have sufficient vision to meet their needs under our definition (the ability to watch television, read, write, and otherwise meet their personal requirements); 75 produced no results or recommendations because of language barriers, mental condition, etc.; 810 (23 percent) were referred to their ophthalmologist or optometrist for eye examinations; 255 were referred to the State Service to the Visually Impaired, along with 60 who were known to be blind from examination of medical records prior to the screening. Thus, 1,125 people, or 32 percent of the residents screened in the 90 homes, were in need of some kind of service, either from an agency serving the blind or from a physician or optometrist. Thirteen percent (447 persons) were found to be legally blind at the time of the screening. Many of those referred will undoubtedly be able to increase their visual functioning immediately upon receiving services. Many, however, are going to need intensive training and rehabilitation in order to function at an adequate level in the areas of mobility and daily living.

The great challenge, of course, lies in the area of follow-up, especially with those who are referred for eye care. The staff of the nursing homes, volunteers, or relatives may take or be given the responsibility for seeing that the recommendations resulting from the screening are carried out. Reports indicate that about 50 percent of the cases have had the follow-up completed. This means that we are going to have to

Setting Up the Project

Screening completed in 90 homes

Results

Follow up

go back to the homes to make sure that every individual who wishes to is able to be seen by a doctor.

□ In summary, the most important results of this screening project seem to be that 1) 13 percent of those in nursing homes are legally blind; 2) 32 percent are in need of services from an eye doctor or an agency serving blind people; and 3) of the 810 individuals referred for additional eye care, some 75 to 80 percent are eligible for medical assistance payments if somebody only cares enough to find and inform them of the fact.

Summary

Future Directions of Government Programs

That there are considerable gaps in programs serving aged blind persons today is a statement that is not likely to be disputed. In addition, barring dramatic and unexpected advances in research, the number of aged blind persons can be expected to increase as a result of our anticipated longer life-span. From the present 215,000 blind persons who are 65 years of age or older, we can expect that there will be approximately 474,000 blind persons in this age group by 1985.¹ Given these facts, what progress in government programs can be anticipated during the next decade—particularly in income maintenance and social and rehabilitation services?

□ In regard to income maintenance, we know that at present there are 80,700 blind persons receiving public assistance in the United States; their median age is 61.3 years, with an estimated 40 percent of them being 65 years of age or older. Since the aged population is, on the whole, poorer than the rest of the population, it is clear that aged blind persons have an even more difficult time maintaining an adequate standard of living than other aged persons. A most significant plan for improving this situation is the proposed Welfare Reform legislation, sometimes called the Family Assistance Plan (even though it includes aged, disabled, and blind people as well). The Welfare Reform proposal has three major features that will affect elderly blind persons now receiving public aid: 1) establishment of a national minimum income of \$130 per person per month for the adult categories, that is, for the needy aged, blind, or disabled; 2) establishment of nationally uniform standards of eligibility; and 3) separation of the administration of income maintenance from the provision of social services.

The minimum standard of need of \$130 per month is slated to rise to \$150 by 1974. This represents a substantial increase in the level paid un-

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Income Maintenance

Minimum standard of need

der the present Aid to the Blind programs in 37 states. In Mississippi, for example, it would more than double the present average payment of \$59.85 per month. In the remaining 17 states, the present level of payment could be maintained if each state picked up the full amount above \$150 per month. Some states may do so because of the increased rate of financial participation by the federal government under the Welfare Reform proposal. In California and Nevada, for example, the present levels of \$172 and \$168 respectively could be maintained with no additional state outlay. The financing of the amounts above \$150 would be more than offset by the savings accruing to the states from the 100 percent financing by the federal government of the costs up to \$150. Indications are that responsibility for the administration of the adult categories may be placed with the Social Security Administration. A future possibility might be to bring the earnings exemptions for the aid categories into line with Social Security, thus permitting the total disregard of earnings when a beneficiary reaches 72 years of age.

□ A companion measure to Welfare Reform is the proposed social services legislation which was introduced at the last session of Congress as Title XX of the Social Security Act. This bill would remove the provision of services from under the various public assistance titles, including Aid to the Blind. A major aim of the proposal is to enable aged and infirm persons to live in their own homes instead of in institutions. The policy back-up material provides that special services to the blind would include, as a minimum, mobility training, communication skills, and activities of daily living.

Consideration is now being given to proposing legislation that would consolidate social services with vocational rehabilitation. Such a combination has a unique potential for strengthening and increasing services for the elderly blind through utilizing the best features of both programs. One example of this would be greater attention to employment opportunities, such as the development of sheltered workshops adapted specifically for the older blind person who has the desire to work and some capacity to do so. Hours of work, the physical plant, types of contracts, and production schedules could be related specifically to the worker's capability.

Increased use of voluntary agencies may also be expected to result from a merger of social services and vocational rehabilitation. Purchasing from the private sector the varied services needed to rehabilitate an individual has been the traditional pattern of operation of public rehabilitation agencies. Many private agencies, such as the Minneapolis Society for the Blind, the Metropolitan Society for the Blind, Detroit, and the Industrial Home for the Blind, Brooklyn, offer a wide array of services to help the aged blind and have done outstanding work in breaking down the isolation of the elderly blind and integrating them into non-segregated environments.

Volunteers represent a largely untapped resource for assisting the

Separating Services From Public Assistance

Consolidating social services and vocational rehabilitation

Use of voluntary agencies

Volunteers

aged blind in a variety of ways—friendly visiting, reading mail and writing letters, making satisfying leisure-time activities available, and promoting increased participation in the social life of the community, to name but a few. A Tele-care service, manned by volunteers in the San Francisco Bay area, has been set up to check on the well-being of elderly and handicapped persons who live alone. Other innovative approaches are being developed throughout the country.

□ Greater involvement of the consumer both in policy development and delivery of services is anticipated through such mechanisms as membership on advisory boards, serving as non-paid or partly-paid volunteers, and employment as sub-professionals. Client organizations, which have long been active in promoting separate programs and administrative arrangements for the blind, may run into a philosophical conflict with the new direction of federal programming, that is, the elimination of categories. An alternative possibility, however, is the establishment of an ombudsman position to facilitate access to the service-delivery system. This approach could reduce the many obstacles now faced by blind persons in obtaining adequate housing, transportation, employment, recreation, and other essential services.

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Consumer Involvement in the Future

Reference

The Challenge of Aging

When I and a number of other people at the American Medical Association became interested in the subject of aging 15 or 20 years ago, we set out to study the so-called problems and we soon reached some rather simple conclusions. At that time, there was a problem in getting the average physician to take an interest in the older patient and, therefore, getting the older patient into the mainstream of medicine. The attitude was something like, "What do you want me to do, make a new machine with all those old parts?" If a patient was 60 years old, it was felt, there were certain medical procedures that should not be utilized; if he was 65 years old, there were even more, and so on.

□ Today, I can say that the average American physician is interested in the older patient because he realizes that something can be done about getting him into the mainstream of medicine. In my own practice, I

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The Elderly and the Mainstream of Medicine

have two gentlemen who are 70 years of age and who have had open-heart surgery. They had new valves inserted into their hearts and are living and well. A number of patients with aneurisms, which are always fatal if not treated, have been operated on successfully and now have dacron tubes carrying blood from their hearts to some part of their body.

Perhaps the most significant advance, however, is that, as a result of our looking closely at aging, we no longer talk about the "problems" of aging, but the "challenge" of aging. Instead of asking "Where can you put them?"; we ask, "What can you do for them?"; "What can they do for themselves?"; "What can they do for others?" And I think this is a much more wholesome way of looking at the passage of time.

□ One of the very specific things we have learned about aging over the years is that there are no disease entities that result from the passage of time and from time only. In 1964, for example, 64 children under the age of five years died from arteriosclerotic heart disease. If you look at the causes of death, coronary heart disease, cancer, measles, mumps, and so on, you find that they kill both children and the elderly. There is no difference.

The great problem with the older patient is chronic disease, the long-term illnesses. It must be remembered that when the first speck of sugar appears in the urine, the patient has been sick for 20 years. When he gets that first pain in his chest, this is not the beginning of heart disease; the heart has been increasingly diseased for 20 or 30 years before this. In the light of this, the main emphasis in public education programs that are related to health is on prevention of chronic diseases. These problems do not begin when the individual is 65 or 75 or 85 years of age, but when he is 10 or 15 or 20 years of age. It is in an effort to prevent such chronic diseases that so much emphasis is placed on periodic health appraisals.

We also emphasize the importance of physical exercise. The tottering gait, the shaky hand, and other signs of physical debility are not the result of the passage of time, but of the lack of continued vigorous use and exercise. Further, not just physical exercise is needed, but mental exercise as well. We believe that senility, confusion, and loss of memory do not result as much from changes in the body as from the lack of continued use and concentration.

Finally, a very important area of prevention is good nutrition. The problem of obesity, for example, is very serious and our ability to do anything about it is almost nil. Our five-year rate of cure for obese patients is less than five percent, lower than the rate of cure for cancer of the breast. Also needed, in addition to moderation in the intake of food, is moderation in the use of tobacco and alcohol.

□ In summary, our study of the medical aspects of aging has led to the following recommendations: a complete history and physical examination on a periodic basis throughout the individual's life; a formal pro-

No Diseases Resulting Only From Time

Chronic disease

Physical and mental exercise

Nutrition and moderation

Summary

gram of exercise, both physical and mental—not the usual bread and butter kind of mental exercises, but something that is new and different, that exercises the grey cells in the new parts of the brain; and sound nutrition and moderation in habits.

New Program Offers Computer Terminals in Home or Office

ARTS-1, the Audio Response Time-shared System, provides vocational and educational aid through the use of time-shared computerized sensors and electro-mechanical devices. Designed and developed at the Research Laboratory of Electronics, Massachusetts Institute of Technology, the system will be offered to blind persons through the Service Bureau for the Blind, Boston, an independently organized project supported under the auspices of the Protestant Guild for the Blind, Boston, in cooperation with the Research Laboratory of Electronics, MIT.

The ARTS-1 program applies the results of a wide variety of previous research in sensory aids, reading machine systems, and computer-generated speech and braille production. It enables a blind person working or studying at his office, home, or school, to telephone the Service Bureau computer using standard telephone equipment, and then interact with the computer—for a fee of approximately one dollar per hour—by means of a specially designed terminal in the form of standard typewriter keyboard, stenotype keyboard, or braille keyboard. The terminal costs approximately the same as a standard electric typewriter.

The data is transmitted in the form of Touch-Tone telephone signals to the computer, which operates on the information, performing computations or other functions. The user then receives a voice response in the form of recorded speech units giving letters, digits, or appropriate words. In addition, the terminal can be fitted with a small component which will provide a braille printout of data from the computer, as a permanent record.

The project has developed over a period of nearly two years in conjunction with a research program on reading machine systems supported by the National Institute of General Medical Services, the Joint Services Electronics Program, and grants from an anonymous donor. Dr. Kenneth R. Ingham, an MIT research associate who is blind, will be the first director of the Service Bureau.

“Fringe Benefits” of Accreditation for Residential Schools

Since the publication of the *Self-Study and Evaluation Guide for Residential Schools* three years ago,¹ nine schools have completed the self-study process, had an on-site review, and are now accredited by the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped (NAC). The number of schools currently engaged in a self-study is not known, since an expression of intent to seek accreditation is not requested at the time materials for a self-study are ordered. It is known, however, that approximately 15 other schools have purchased sufficient copies of the *Guide* for a self-study. This means that about half the residential schools in the United States were sufficiently interested to explore the possibility of accreditation as a means of working toward program improvement.

□ In a previous article on the meaning of accreditation to residential schools,² some of the benefits that are more or less external to the school were summarized. Accreditation, it was noted, is a means by which the general public (taxpayers in the case of publicly supported schools and voluntary contributors in the case of private schools) can recognize quality schools that are worthy of their support; it gives assurance to public and private funding agencies that programs meet accepted standards; it signifies to parents who are concerned with obtaining a quality education for their children that the school meets the minimum standards for similar programs; it means that the education received by the students will qualify them for admission to programs of further education; and, finally, it assures school personnel that their experience is acquired in a quality setting, thereby making the school a desirable and sought-after place of employment. Although it is too early to assess the impact that the awarding of accreditation has had on school programs, the self-study process itself seems to have produced a number of “fringe benefits” that, because they are internal to the school, its staff, and its operations, are often overlooked.

□ The first phase of the self-study process is the development or review of the statement of the philosophy and objectives of the school by school personnel. This statement is used in both the self-study and in the on-site review as a standard against which programs are measured. Beyond that purpose, however, evaluation of the statement of philosophy and objectives presents an opportunity for the school personnel to raise some important questions regarding the purpose and function of the school, its relationship and contribution to society, the relevance of its program for the present-day student, and the place of the school within the structure of educational services in the geographical area served by it.

Raising and answering these questions during the self-study is required

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External Benefits

Philosophy and Objectives

A time of questioning

by the times in which we live, for society itself is scrutinizing each and every social institution. That which is not relevant may be seriously challenged, as is the case with some critics of general education who are suggesting that public schools be abolished. If the school staff cannot answer such questions and realistically appraise the role of the school and the reason for its existence, then legislators, the general public, parents, students, and many others will begin arriving at their own answers, ones which may not be consistent with the aims and objectives of a residential school for the blind. One way to dramatize the importance of this phase of the self-study and to provoke serious thought might be to organize a debate on the question "Should Springtime School for the Blind be Abolished?" Various staff members could be assigned to take sides on the issue and answer many of the questions that are currently being raised about the role of the residential school. The intellectual stimulation provided by such an exercise to individual staff members may keep them oriented to the present and the future and sensitize them to the changing directions of education.

□ Only an ostrich would say that the population served by the residential school today is similar to the one served even as recently as 10 years ago. One has only to scan the program of a professional meeting for educators of the visually handicapped to see that the major characteristic of today's visually handicapped school-age population is the diversity and multiplicity of their problems. The self-study process requires that the school staff gather data on the nature and needs of the population that the school serves. Here again, some exercises on the part of the staff may be appropriate and revealing: for example, comparisons of the students about to leave the school with new entrants, the present graduates with those 10 or even five years ago, or the current year's admissions with those five and 10 years ago. Knowledge of the changing nature of the residential school population should help each staff member in more effectively performing his role of meeting the needs of present and future students. Further, knowledge of the changing school population will help the entire staff to determine needed changes in program emphasis.

Sections of the self-study for various aspects of the program of the school are prepared by those most intimately connected with each aspect. A valuable end-product of the self-study is lost, however, unless some mechanism is devised to share the findings of each committee with the entire staff. Those who direct their efforts toward a single aspect of the school program, either curricular or extra-curricular, need to know how their part contributes to the whole as well as how all of the parts are inter-related. Further, a staff member not connected with a particular area of the program might be able to make a valuable contribution to the sub-committee evaluating that section. This can be a two-way contribution, the outsider learning about an area not known to him before and the area staff profiting from questions raised by him.

Schools completing the self-study for the first time may wish to devote several staff meetings to an intensive review of the various sections.

School Population

Sharing findings among staff

The mock on-site review

Schools already accredited may wish to conduct a mock on-site review each year during the interim between official on-site reviews by NAC. Staff members could be appointed to the team on a rotating basis. Schools adopting this practice may find that their staff review teams are more critical than the outside team. If so, they should be pleased, because self-criticism can lead to a more dynamic and responsive program.

□ A major objective of the self-study should be the development of a plan for improvement that is based on a realistic appraisal and evaluation of the current program of the school. The process should identify where modifications are needed to make the program consistent with its stated philosophy and objectives and with the needs and characteristics of the population served. The self-study should show where the strengths and weaknesses of the program lie. The guidelines for program improvement should flow from a critical analysis of these. Total staff involvement in this part of the process will result in a greater commitment to effecting the changes necessary for improvement of the program.

Another benefit that can and should result from the self-study process is an increase in the ability of staff members to work together. As individuals and as representatives of various disciplines, we encounter difficulty in working together effectively. Our past training and experience emphasize individual contributions to the solution of problems. Yet, no professional, either as an individual or as a representative of a discipline, has all the answers. The team approach, the working together of individuals from within a discipline or from several disciplines, is being increasingly recognized as the most effective way to attack human problems. Working together in a professional setting to achieve a common goal can help staff members to learn the team approach, for it cannot be taught, only experienced. The self-study process, with its emphasis on the cooperation of several sub-committees, can be just such a learning experience for the school staff. Several school superintendents have noted that this kind of team experience has resulted in better staff relations during the year following self-study.

The on-site review also has certain "fringe benefits" that might be overlooked. The staff of the school has an opportunity to meet with and secure reactions from members of the review team, who as outsiders can take an objective view of what the school is doing. Each team member also benefits, however, for an in-depth study of the program of another school provides him with an invaluable perspective on the program of his own school. There is, therefore, much to be gained both by being visited by an on-site review team and by serving on such a team.

□ These benefits do not result automatically from engaging in the self-study process, but rather only when it is carried out in a certain way. For maximum results, all staff members would be involved and committed to the undertaking. Although the degree of enthusiasm among them will undoubtedly vary, there should at least be a recognition of the objectives of the self-study and of the potential contribution it can make to improving the program of the school. Staff members should be willing to clarify the

Planning for the Future

Cooperation and the team approach

Mutual benefits of review teams

The Spirit of Self-Study

philosophy and objectives of the school and its role in the educational system. They should objectively study the nature and characteristics of the pupils they serve. They should assess the total school program in the light of the needs of these pupils and the needs of today's society. This assessment should lead to the formulation of long- and short-range plans for improvement. Finally, the self-study, once completed, should not be forgotten; rather, it should be re-evaluated through continuous assessment.

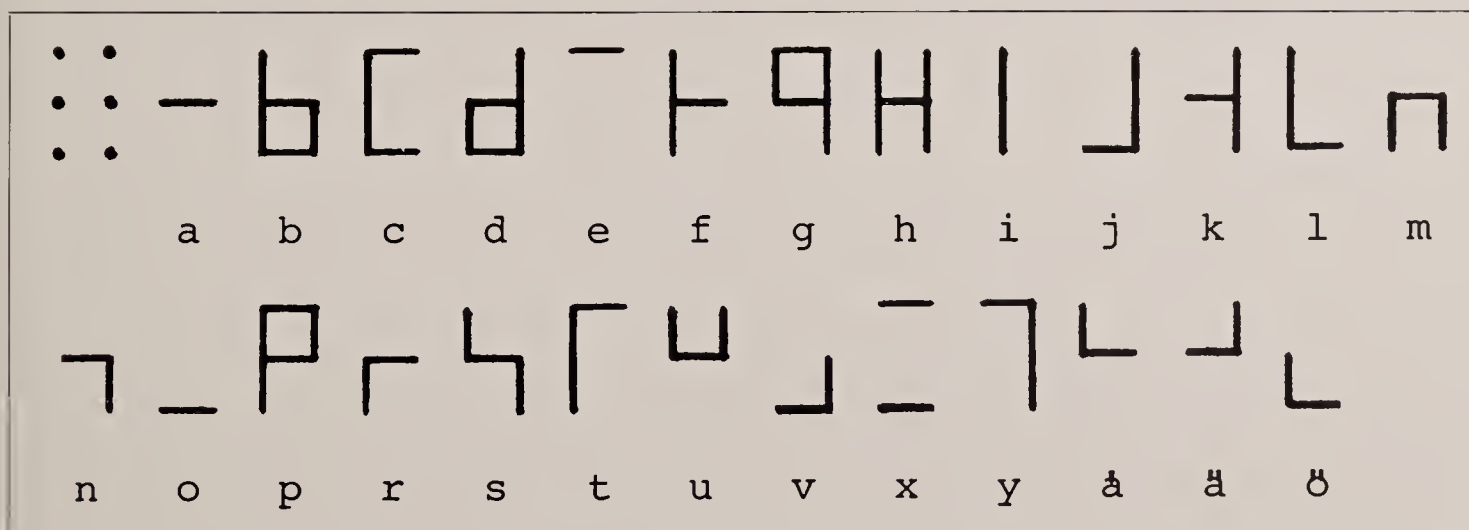
Improvement in school programming cannot result from accreditation alone, but from staff members working together toward improvement through a plan that is understood and accepted by all. Accreditation through the mechanism of the self-study can only provide the stimulus to the staff; the staff must do the real work to bring about change.

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New Swedish Computer Alphabet Is Based on Braille

Leif Andersson, a Swedish electrical engineer, has created a new computer alphabet (reproduced below) based on the six-dot configuration of the braille cell. The advantages of the alphabet are that it can be read by a computer, it can be easily learned by those with normal sight, and it is easier for blind persons using photo-cell reading machines to comprehend than ordinary alphabets. Work on the alphabet, as well as developmental research on a reading machine prototype, has been carried out under the auspices of the Swedish Board for Technical Development (STU).



Learning Through Listening:

A Review of the Relevant Factors

In order to function effectively, all students need ready access to a vast amount of written information. Problems associated with the acquisition of materials often arise for the sighted student, but the same problems are compounded for the visually handicapped student. Transcription of written materials to braille or large type requires time, and the immediacy of each student's needs often precludes the preparation of material in these forms. As a result, the blind student must turn to reader services, tapes, and disc recordings to supplement those materials that are available to him.

Educators of the visually handicapped have become increasingly aware of the trend toward greater aural study, and have begun to search for more effective ways of meeting the present and future needs of their students. It seems appropriate then to carefully review and analyze the research which has focused upon aural study and learning.

Results of listening research have been quite suggestive of practices and techniques which could aid the student using aural materials. A review of the research has revealed that studies of listener characteristics and listener behaviors have been two areas of major research interest. In addition, the relationship of stimulus format to the learning task has been explored.

□ The arrangement of an aural learning condition for the visually handicapped listener should certainly consider his personal characteristics as well as certain aspects of the educational environment. The effects of such variables as visual acuity, level of IQ, age, and sex must be determined.

Hartlage¹⁷ reported no significant differences in listening comprehension between sighted and blind groups when the groups were matched on the basis of age, sex, and IQ. Testing only visually handicapped subjects, Nolan²⁶ found that scores obtained from the administration of the STEP Listening Test were not significantly related to categories or levels of visual acuity within the subject group.

In subsequent research, Morris and Nolan²⁴ noted differences between listeners who generally used braille and those who read large type. Listening scores of the braille readers were superior to those who used large type, but only when the material was judged to be difficult. Differences were not demonstrated when the material was easy.

Level of intelligence has been generally accepted as influencing listening comprehension. Reported correlations between IQ and listening comprehension have ranged from .38 to .59.^{2,4} Hartlage¹⁷ reported a rank order correlation of .79 between IQ and listening comprehension for blind students and a correlation of .66 on the same variables for a sighted group. Data reported by Brothers⁶ also demonstrated the strong relationship of IQ to listening comprehension.

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Listener Characteristics and Listening Comprehension

Visual acuity

Relationship of IQ

The age factor in listening comprehension for school children has not been directly explored, but conclusions may be drawn on the basis of studies dealing with age as represented by school grade. Nolan²⁶ reported that significant increases in listening ability appeared between grades four and six, but with no differences after the sixth grade. These findings partially supported Brown,⁸ who had used sighted subjects when he found that listening ability did not improve significantly after the seventh grade. Sex of the listener has not appeared to be significantly related to listening comprehension.⁴

Age, grade, and sex

As might be expected, the relationship of academic achievement and listening comprehension have been quite similar to those for listening comprehension and IQ. Nolan²⁶ has reported the rank order correlations between STEP Listening Test scores and subtests of the Stanford Achievement Battery. Correlations of .32 to .76 were obtained for paragraph and word meaning scores on the SAT and listening scores on the STEP test. In fact, positive relationships between achievement test scores and listening comprehension existed over the range of subtests from grades four through nine.

Education

The investigation of relationships between reading (both visual and tactual) and listening has demonstrated rather consistent results. Hackett¹⁶ defined 11 language comprehension skills and found no significant differences between groups tested by a reading or a listening approach.

□ Effectiveness of aural learning has in some cases been dependent upon the type of material and the level of difficulty it represented. Results of a study by Karraker¹⁹ indicated that type and caliber of material was a primary determinant of effectiveness. Bleighley³ found that easy material, as classified by the Dale-Chall formula, was more easily comprehended than difficult materials. Nolan²⁶ reported superior comprehension scores when materials classified as social studies were compared with literature or science. The study further revealed that literature was superior to the science matter.

Outside Influences on Listening

Klare, Mabry, and Gustufson²⁰ expected that material having a high interest, as measured by the Flesch Human Interest Formula, would produce increased comprehension by being more acceptable. Their assumptions, however, were not supported in terms of the amount read or degree of immediate retention. On the other hand, Martin²² noted that the subject's interest in the material and his opinion relative to its difficulty correlated significantly with comprehension scores.

In addition to differences associated with the types of material, rate of presentation has also received some attention. The presentation rate of recorded materials may be accelerated by the use of various compression techniques. It has been generally demonstrated that listening comprehension begins to fall off rapidly when the presentation speed reaches 250 to 325 words per minute.¹³ Woodcock and Clark³¹ found that word rates in the range of 228 to 328 were more efficient than normal rates when using a criterion based on a learning efficiency index. Because compression tech-

Presentation rate

niques require special equipment and processing time, compressed materials have been relatively inaccessible to the student.

As part of a listening efficiency study, Nolan²⁶ investigated distributed learning and found that listening distributed over a three-day period was superior to a single massed presentation. When additional practice or time on the task was provided, however, learning was correspondingly increased by nearly equal amounts.

Canfield⁹ has noted several general conditions necessary for a listening environment. These are: (1) adequate physical conditions; (2) materials appropriate for the individual student; (3) provision of opportunities for self-expression; and (4) minimal auditory and visual distractions.

Results of the research have focused upon the characteristics of the listener, his interests, and the degree of his dependence on aural stimuli for information. Differences have also been noted in relation to types of material and the physical conditions of the listening situation. Closely related to these factors are the actual listening behaviors of the student.

□ Several surveys have investigated the listening behavior and study habits of visually handicapped students. Carter and Haskell¹⁰ interviewed 366 full-time college students who had used recorded material provided by Recording for the Blind (RFB). The study noted a strong relationship between the user's study techniques and his level of academic functioning. Nolan²⁶ and Morris and Nolan²⁵ interviewed high school and college students concerning desirable textbook format and the study techniques being used in aural study.

The surveys have shown that the characteristics of the material, its presentation format, and the nature of the listening task present common problems for the user. Reported study habits varied with the type of materials and the level of difficulty. Reports indicated that the college group was generally satisfied with fast-paced material, but felt the presentation of technical matter and languages should be at a slower rate. Science material was commonly heard several times, but preferences were mixed concerning repetition within other subject matter areas.²⁶ The time spent on the listening task often varied in direct proportion to the length of what was being read. Study time was also scheduled to reflect the subjects' needs for massed or distributed practice.

Although listening behavior was shown to be related to the type of material and to the purposes for listening, another component of the listening-study condition was recognized. The most common behavior reported was that of note-taking. Described as student-subject matter interaction, it usually comprised some part of the listener's study activity. When using recorded material, subjects found it more efficient to summarize thoroughly with notes or outlines during the first presentation and refer back to them for review purposes.²⁶ The Carter and Haskell¹⁰ report noted a common practice of selectively recording important passages on a second recorder. It was noted that subjects who owned a tape recorder read more material and received higher average grades. In each of the studies, the majority of the subjects had not received formal instructions in the use of recorded materi-

Environment

Listener Behavior and Listening Comprehension

Characteristics of material

Student-subject matter interaction

als, but apparently those who had an opportunity to become familiar with recording technique were able to be more innovative in their use of the equipment. These results suggest that features found in the playback equipment may structure some of the listening behaviors adopted.

Another aspect of the listening task was that of maintaining an adequate level of concentration. Respondents felt that control of the environmental situation was improved through the use of earphones or some other strategy to minimize potential distractions. Note-taking activity was also considered as an effective means of attending to the task. Nolan²⁶ found a positive relationship between regular note-taking and scores on the STEP Listening Test. A subsequent study²⁷ of active and passive listening confirmed the importance of note-taking activity for the comprehension of recorded material. In attempting to focus on the type of notes taken, McClen-don²³ investigated three note-taking conditions, but found no significant differences on immediate or delayed recall.

Respondents to the user surveys felt that supplements to the recorded matter should be made more readily available. Additional information such as introductions, study questions, vocabulary word lists, raised line drawings, and complicated tables and formulae were used as examples of needed supplements. Regarding the presentation format of the supplements, recordings were suggested for introductory messages, suggested activities, acknowledgments, and footnotes, but reference materials such as bibliographies, indices, tables of contents, and graphics were preferred in written form. About one-fourth of the subjects indicated graphics would be more effectively presented if both an aural and written presentation were made.²⁵

Some of the study techniques currently being advocated suggest that the skills developed for effective reading comprehension are equally applicable for those who learn by listening.^{18,26} The abilities to recall or identify a sequence of ideas, to recognize the author's purpose and attitude, and to criticize constructively have been identified as desirable objectives for both the reader and the listener.^{11,29}

□ Assuming then that similar types of student behaviors are required for the effective input of aural or written messages, the study programs designed for written stimuli may provide a model to describe the study task of the aural learner. For example, an analysis of the "PQRST Method"²⁸ or the "Triple S,"¹² which were designed for the study of written materials, has revealed that the tasks of the student are quite similar and well defined. Initially the student is asked to achieve a frame of reference or anticipate the nature of the materials. The next phase of the plan proposes that the student actively interact with the material and, finally, the student summarizes and states in his own words the basic conclusions or generalizations that were drawn from the reading.

These study plans were developed to utilize the presentation formats commonly found in many textbooks. Written materials use several format techniques to achieve a desired emphasis. For example, a student may quickly learn to attend more closely to words or phrases which have been underlined, italicized, or set apart by type size. At the same time, the task

Attending behavior

Supplementary materials

Listener objectives

Study Models for the Aural Learner

of scanning, note-taking, or summarizing may be facilitated through the use of this kind of visually-oriented cue. When the material has been recorded, special measures are sometimes needed to insure that the desired emphasis shall not be lost.

□ As previously stated, the task of the listener has been thought to involve: (1) establishing a frame of reference, (2) interacting with the materials, and (3) assimilating the message to the extent that it is understood. In their efforts to achieve assimilation, experimental formats have attempted to capitalize on the first two aspects of the listening task.

Some formats have attempted to supply a preview or scan of the material through the use of recorded summaries, forewords, and introductions. Friedman, Orr and Graae¹⁴ reported the effects of providing subjects with a written summary of the recorded passage prior to the aural presentation. In addition to the summary, auditory cues which announced material thought to be crucial for comprehension were provided. Although comprehension scores were not significantly different, gains in the group mean in comprehension were noted. Brown⁷ reported the improvement of STEP Listening Test scores when a short introductory statement about the test was made. It has been suggested that such precursory materials provided an "anticipatory set" regarding the materials to be learned.

Brandes and Shepardson⁵ have noted that when the student was given the circumstances of the selection, its main characters, and some selected vocabulary, an effective frame of reference was being provided. Brothers⁶ found that provisions for a general frame of reference did not affect listening comprehension scores significantly, but felt the practice of advance class preparation should continue to be generally effective. Instances were noted in which replications of experimental conditions such as the use of brief descriptions, study questions, and vocabulary exercises resulted in significant increases in learning.^{21, 30} It now appears that the content of the introductory message may be the pivotal factor in achieving higher levels of comprehension through frames of reference.

□ The most common technique used to promote a student-subject matter interface has been the interruption of the stimulus message. A recorded message may be interrupted at specific or random points, and the result has subsequently defined the length of the stimulus message. The pause has also provided an opportunity to call for an explicit student response.

Gropper and Lumsdaine¹⁵ arranged an experimental lecture situation for six classes of seventh and eighth grade students. The lecturer paused at strategic places to allow the subjects to make active and explicit responses. It was noted that the experimental subjects were also provided with feedback to their responses. Results of the study indicated that the experimental lesson was significantly more effective than the regular presentation.

Research in the area of compressed speech has suggested that interruptions of the message for recitation result in greater comprehension of compressed materials than messages presented at compressed rates without pauses.¹³

Nolan²⁷ utilized an interrupted message model to study the effects of

Stimulus Format and the Learning Task

Frame of reference

Content of introduction

Interruption of the Message

Participation is important

active listener participation. Three conditions were established, two of which required active listener response. The third condition was described as passive listening and did not require a specific response to the message. Results indicated that interrupted modes were superior to the continuous or passive listening condition when the time provided by the interruption was used to interact with the material.

The possibility existed that the length of the stimulus message was an important factor in the results obtained. Brothers⁶ found that segmenting the aural stimulus into message lengths of six minutes and less did not significantly affect comprehension scores when the time allowed for the subjects to interact with the total message was held constant.

□ In a review of audio-visual communications research, Allan¹ has suggested several simple practices which should certainly enhance the possibility of greater aural learning. Suggested techniques were: (1) the study of difficult words, (2) the use of study questions, (3) asking questions of the material, (4) reading a brief account of the content, and (5) focusing upon the importance of the material. Basically the suggestions provide many opportunities for the student to attend more closely to his instructional materials.

An underlying objective in most of the studies has been to encourage greater attention to the listening task. Efforts to achieve this objective have resulted in the manipulation of the stimulus format, the control of the listening environment, and the suggestion of specific listener behaviors to be used. Characteristics of the individual have been noted since they will influence our expectations regarding the students' listening performance.

For the most part, those factors identified have been associated with significant increases in aural learning, but further verifications should be made. In the last analysis the creation of an effective learning environment is the responsibility of the teacher. Day-to-day decisions are required as attempts are made to develop and utilize innovative and effective teaching techniques within the framework of a controlled learning environment. In this respect, a review of the relevant research may serve to facilitate the decision-making process.

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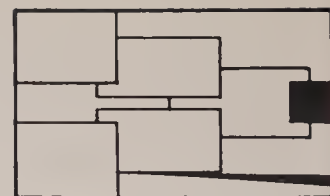
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Listening Research Outline Offered to Graduate-Level Students

A graduate-level research project on pattern perception through listening to be conducted in a junior high school setting was recently designed by John D. McDowell, a blind practicing attorney in Connecticut, as a part of his graduate program in education. Finding that he is now unable to continue with both the project and his studies because of advanced age, Mr. McDowell is offering his outline for the research project, some initial impressions and findings about the problems involved, and a preliminary bibliography to any master's or doctoral degree student who needs an original, practical field study as a part of his own program. Anyone interested is invited to inquire. All correspondence should be sent to John D. McDowell, 29 Sunset Terrace, West Hartford, Connecticut 16007.



Dr. Milton D. Graham, the author of the following guest editorial, is director of the Research Department, American Foundation for the Blind.

There is a French saying, *Plus ça change, plus c'est la même chose!*—the more things change the more they stay the same. That can be argued both ways. Change is so much a part of our lives today that we rarely think about it. Only an anniversary, like AFB's 50th anniversary this year, can make us pause to consider.

There have been changes in all our lives, some good. We live longer, we eat better, we no longer have to fear polio and cholera epidemics, we have almost eradicated illiteracy, we travel farther and have many more choices of pleasure and entertainment. But then there have been some persistent problems that seem to resist change, like using military power in the fields of social and economic policy and accepting the physical and personal blight that envelops our cities. It is a confusing picture: vast change and no change at the same time in all our lives. Being blind or sighted seems to make no difference in this confusion when you get down to particulars.

I am a researcher trained to observe human behavior, to ask questions, to probe beneath the obvious, to analyze, to explain, to suggest changes. I am very much a part of the world around me as everyone reading these words must be, whatever their training and experience. For 12 years I have studied the world of the blind and severely visually impaired and I have found it to be, in most ways, very much a part of the larger sighted world. The blind have enjoyed the advances in health, nutrition, mobility, communications, and, to a lesser extent, better working conditions and the economic prosperity that purchases the creature comforts. They have also suffered the wars—some indeed were blinded in

military service—and the worst aspects of urbanization.

Changes in Attitudes

But in some ways the changes have been different. I think that the blind person is more widely accepted by the society around him and that there is less stereotyping in social interaction. The blind beggar, the blind genius, the possessor of the sixth sense, the poor blind—all of these impediments to healthy interaction with sighted persons are largely gone. Public education programs stressing individual accomplishments of blind persons have helped. More basic, however, is the general realization that blindness in this country can no longer be attributed to syphilis and poor health conditions, as it once was. Aging, birth anomalies, accidents, and injuries—the principal causes of blindness today—do not carry social stigma. Equally important, two groups have forced a more realistic image of blindness on the public: the RLF's and the blinded veterans. The RLF's, blinded by oxygen poisoning in oxygen tents, have competed favorably through the last decade and a half, as their parents and some researchers have loudly proclaimed. The blinded veterans, with much preliminary help and a sustained economic flooring through their disability compensation, have re-established themselves as contributing members of society. These groups have proven that blindness need not be a hopelessly catastrophic condition that ends in helplessness.

Advances in Education

This more realistic social acceptance of blind people by others and by themselves is evident in certain changes in the field of education. For example, the general acceptance of the idea that "conserving" sight was a mistaken concept and that the use of residual vision need not impair it has led to the increased use of low vi-

sion aids. As a result, most blind children with residual vision have come to function more like sighted than totally blind learners. Also available—though not yet in satisfactory numbers—are such special aids as tapes, discs, and closed-circuit television (this last still largely a dream). Technology offers today more efficient and more economic braille production if the field is willing to accept it.

Besides visual and technical aids, another fundamental change has come about in education. It is now generally accepted that however multiply handicapped a child may be—and many blind children are—specialized curricula and ancillary services can produce surprising results. This thinking has produced the first national program for the deaf-blind that is supported by the U.S. Congress.

Little Progress in Other Areas

If social acceptance and educational progress show definite trends of beneficial change, the same can not be said about other areas. Medical advances in the field of ophthalmology have not been spectacular, although the virtual elimination of retrolental fibroplasia and developments in corneal transplants can be cited as positive developments. Surgery for traumatic injury and for cataracts have not changed much in the last few years. The recent interest of optometrists in low vision aids may eventually fill that gap in needed services. In the field of prevention of blindness, it is generally agreed that 80 percent or more of all blindness could be prevented at some stage, provided that mass early-detection screening programs and expanded services for low vision aids and cataract surgery (particularly among the aged) are instituted.

As far as changes are concerned, other services seem to move only very slowly. Too often vocational training remains traditional. With few exceptions, such

as training and placing computer programmers, the expanding world of technology around us seems to be ignored. There is no evidence that a larger percentage of blind persons are gainfully employed than, say, 20 years ago, particularly in the professional and technical fields.

While undoubtedly the economic condition of most blind persons has improved over the years as the position of their families has bettered, a significant and highly visible population remains wholly dependent on a welfare system that is antiquated. In contrast, blinded veterans, in effect, have a guaranteed annual income in the disability compensation paid for the injuries that they received in the service of their country. The average payment was only \$4,000 per year in 1965; yet, 90 percent of them worked at some time after the onset of their blindness and there are probably three to four times as many of them working now as against any other group of blind males.

Rehabilitation Is Lagging

Equally uninspired in its acceptance of change is the field of rehabilitation. Intake procedures, many traditional training programs, and, especially, follow-up procedures (where they exist) are well grounded in the 1950's. Many sheltered workshops are not training facilities but

terminal workshops. Programs for the pre-vocational, personal orientation of the recently blind too often stifle individual desires in order to effect adjustment; it is usually assumed that the only happy blind man is a working blind man. This preoccupation with work rather than with the individual and his total needs has caused services for the aged blind to be minimized or, until recently, forgotten. It seems that this adherence to rigid training and orientation programs has also caused many blind persons to go without them or to drop out to protect their sense of individuality. If services could be purchased by the client, instead of prescribed for him, there might be some changes in the system.

The Effect of Blindness

Behind the little changing fields of economic assistance and rehabilitation, there is a theory that I think needs to be challenged. It says that when blindness occurs it is always a staggering catastrophe from which one needs to be reborn—with the proper help, of course, and with the proper program, of course, devised by experts in the field with the best of intentions. I suggest that this is quite contrary to a considerable body of knowledge which demonstrates that however catastrophic an event is, the basic integrity of

the personality of the affected individual remains intact and eventually re-asserts itself, with or without help.

I have seen thousands of men in military service operating in hostile, alien areas under enormous pressure who survive serious wounds and temporary breakdowns to return to duty (sometimes limited duty), their sense of their own personal worth intact. I cannot believe that the conditions were so special nor the men undergoing disaster so different that the integrity of the personality can be respected in one case and not in another. The fundamental integrity of the personality and its development does not change whatever temporary manifestations of change may appear. Services for blind persons based on this theory might, as a result, find it easy to influence the direction and emphasis of development.

I believe in the integrity of the personality and its persistence through great trial. I started by saying that we live in a confusing world of fundamental and superficial change; some of it, in my opinion, is good, some bad. I end by taking a liberty with the French saying *Plus ça change*: the more things change, the more the fundamental integrity of the personality remains the same. And that applies especially to the blind.

Answers to Accreditation Questions

NATIONAL ACCREDITATION COUNCIL FOR AGENCIES

SERVING THE BLIND AND VISUALLY HANDICAPPED

Q. We've heard a lot about the benefits of the accrediting process, but what are the benefits of accreditation after it has been granted?

A. Some of the most important benefits of accreditation come only after an agency (and in the term "agency" we also include schools) has been accredited. These fall into three main categories:

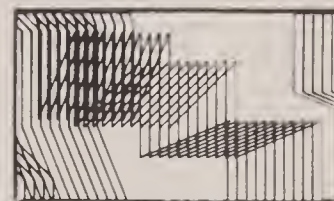
1. *General Agency Operations.* Ac-

creditation can help in getting and keeping top quality staff and board. Such individuals will want to be associated with an agency of nationally recognized quality and, increasingly, as in the case of education, candidates for staff and board will look for the symbol of accreditation before they seek or accept appointment or election.

Accreditation provides the stimulus that can keep an agency executive in the

mainstream of ideas and improvements in the field. Even if the executive himself does not have time to keep up with new developments as much as he might wish, new knowledge and broad experience will be incorporated in the standards from time to time and will, therefore, become available to him. Better still, they will be presented in a form designed to help him apply the ideas to his agency.

Accreditation also provides an impor-



tant management tool by which the forward-looking agency executive can bring about desirable changes in an objective manner. This tool, the annual report to NAC, deals with specific improvements that the agency has made and is planning to make. The executive does not have to initiate this process—it is initiated for him each year by the NAC annual reporting system. In addition, these reports to NAC can provide part of the data needed by the executive when he reports to his board, united fund, or legislature. Progress noted in NAC reports can provide important highlights for other reports.

2. *Financial Support.* It appears that accreditation will increasingly be a prerequisite for government contracts, grants, and support from united funds, private donors, and foundations. This point was made repeatedly by the speakers at NAC's annual meeting, held last May in Fort Lauderdale, Florida. Warren Thompson, assistant regional administrator, U.S. Department of Health, Education, and Welfare, Denver, cited the fact that the Council of State Administrators of Vocational Rehabilitation has already passed a resolution requiring that all agencies providing services to clients of state divisions of vocational rehabilitation must have achieved accreditation by 1976. He also mentioned the present trend in many states to absorb separate agencies for the blind into "umbrella" agencies. Agencies for the blind that can give no objective evidence (such as that provided by accreditation) that they are doing a good job, will be particularly vulnerable to dissolution, he warned.

John R. May, director of the San Francisco Foundation, pointed out that united funds have already begun to question whether allocations should be made to agencies that are neither accredited nor seeking accreditation. Continued support would obviously be contingent on continuance of an agency's accredited status. He added that there is growing evidence that the public as a whole is interested in doing what it says it is doing and doing it well; agencies that cannot provide such assurance may find it increasingly difficult to raise funds.

3. *Personal and Professional Effectiveness.* Professionals who are a part of NAC through their accredited agencies can play a leadership role in the continuous up-dating of standards and the development of new standards that are important to both the users and the supporters of services for the blind. This is a natural outgrowth of the establishment of accreditation. Professional ethics require that professionals contribute to new knowledge and make sure that those they serve receive the best possible service. Participation in the accreditation program identifies a professional as dedicated to high standards of performance and service.

Q. We understand that accreditation is for a five-year period, but we have just heard that some agencies are accredited for only two years. Why is that?

A. Accreditation is intended to help agencies to improve their services as well as to give recognition to those that substantially meet nationally accepted standards. Sometimes an on-site review team

will determine that an agency generally meets the standards, but that it has certain identifiable weaknesses in urgent need of correction. If the agency has demonstrated the will and the capacity to remedy these weaknesses within a stated period, accreditation may be granted for less than the usual five years. Review at the end of the shorter period may result in extending accreditation for the full five years or in withdrawal of accreditation. A number of agencies have found that this type of accreditation provides a basis on which they can make important improvements in their services.

An agency which falls somewhat below the nationally accepted standards, but which also can demonstrate the will and capacity to remedy deficiencies, may have accreditation deferred. Such an agency, if it can submit satisfactory evidence of specific improvements, may later be accredited. In fact, two such agencies have already earned accreditation.

An agency that does not meet standards, and that does not show the capacity to remedy its deficiencies any time in the near future, may be denied accreditation. When such an agency feels ready to apply again, a new self-study report is submitted to NAC and a new on-site review is scheduled.

What is your question about accreditation? Send it to the National Accreditation Council, Suite 1406, 79 Madison Avenue, New York, New York 10016. If it is of general interest, we will try to answer it in this column, but you will in any case receive a direct, prompt reply.

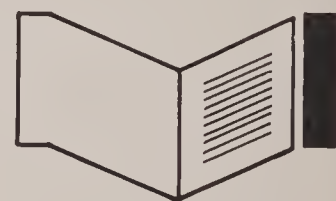
Current Literature

Handicapped "Hams." *Performance* (The President's Committee on Employment of the Handicapped, Washington, D. C. 20210), Vol. 21, No. 7, January 1971, pp. 6-8. The story of the International Handicappers' Net (IHN), a radio network of handicapped amateur radio operators.

IHN has more than 3,000 members, many of whom are blind, in all the states and in almost all countries.

Peace Corps Volunteer; Any Job in America. *Performance* (see address above), Vol. 21, No. 7, January 1971, pp. 11-15. Sue Bow-

master, a blind Phi Beta Kappa graduate who studied Spanish at Georgetown University in Washington, D. C., spent two years with the Peace Corps. She taught English in Honduras and home economics in Costa Rica. Both assignments were in schools for the blind.



The Formation of Concepts Involved in Body Position in Space, by Everett W. Hill. *Education of the Visually Handicapped* (1839 Frankfort Avenue, Louisville, Kentucky 40206), Vol. 2, No. 4, December 1970, pp. 112-15, Vol. 3, No. 1, March 1971, pp. 21-25. A two-part report on a study which explored the possibility of developing meaningful concepts by teaching selected terms (front-back, left-right, above-below, etc.) in a formalized manner to congenitally blind children between the ages of seven and nine.

Measuring Geographical Concept Attainment in Visually Handicapped Students, by Frank L. Franks and Carson Y. Nolan. *Education of the Visually Handicapped* (see address above), Vol. 3, No. 1, March 1971, pp. 11-17. An exploratory study aimed at developing a short-form group test for use with both braille and large print readers.

Braille Reading: A Review of Research, by Carol S. Cline and John Cardinale. *Education of the Visually Handicapped* (see address above), Vol. 3, No. 1, March 1971, pp. 7-10. The authors contend that teaching methods used with blind children should be re-evaluated. They suggest that special reading material be developed that would be sequenced to agree with research findings on the order of character legibility.

Teaching Water Safety Skills to Blind Multi-Handicapped Children, by Elizabeth A. Curren. *Education of the Visually Handicapped* (see address above), Vol. 3, No. 1, March 1971, pp. 29-32. The author was special consultant to a swimming program developed at the Minnesota Braille and Sight Saving School, at Faribault.

Postural Determinant in the Blind (The Influence of Posture on Mobility and Orientation) by Irwin M. Siegel, chief investigator and Thomas J. Murphy, project director. Illinois Visually Handicapped Institute (1151 South Wood, Chicago, Illinois 60612), August 1970, 72+ p. Final report on Grant No. RD-3512-SB-70-C2 from the Social and Rehabilitation Service of the U. S. Department of Health, Education, and Welfare.

Rubella and the Eye Specialist. *The Sight-Saving Review* (National Society for the Prevention of Blindness, Inc., 79 Madison Avenue, New York, New York 10016), Vol. 40, No. 4, Winter 1970-71, pp. 211-18. A review of the ocular defects connected with congenital rubella based upon studies made during the 1963-64 epidemic.

The Ultrasonic Spectacles: An Electronic Mobility Aid, by Walter Thornton. *St. Dunstan's Review* (191 Old Marylebone Road, London N. W. 1, England), No. 616, February 1971, pp. 10-11. A brief report on Professor Leslie Kay's mobility device, test trials of which are being sponsored by St. Dunstan's.

Perceptual Learning Disabilities in Blind Children, by Jerome F. Brodlie and John Burke. *Perceptual and Motor Skills* (University of Montana, Box 1441, Missoula, Montana 59801), Vol. 32, No. 1, February 1971, pp. 313-14. A pilot study conducted with 119 totally blind and 81 legally blind children to help clarify the etiology of learning disability in the reading skill area.

Living Arrangements of Aged, Blind, and Disabled Public Aid Recipients in June 1970—A Special Report. *Public Aid in Illinois* (State of Illinois, Department of Public Aid, State Office Building, 400 South Spring Street, Springfield, Illinois 62704), Vol. 38, No. 2, February 1971, pp. 27-29. A special study of the public assistance recipients in Illinois.

Blindness As I See It, by Michael Levy. *The Braille Monitor* (National Federation of the Blind, 2652 Shasta Road, Berkeley, California 94708), April 1971, pp. 503-6. Personal narrative by a blind college student, reprinted from the *Asbury Park* (New Jersey) Press.

Programs for Handicapped. *Journal of Health, Physical Education, Recreation* (American Association for Health, Physical Education, and Recreation, 1201 16th St. N. W., Washington, D. C. 20036), Vol. 42, No. 4, April 1971, pp. 59-64. Four articles concerning athletic activities for the Blind: "Blind Bowling" by Oral O. Miller; "Integrating Visually Handicapped Children into a Public Elementary School Physical Education Program" by Gladys

Johansen; "Physical Education for Visually Handicapped Children," by Charles Buell; and "Tin Cans and Blind Kids," by Lester Citron.

Psycho-Dynamic Development Problems in the Congenitally Blind, by Lenore L. McGuire. University Microfilms, Inc. (300 North Zeeb Road, Ann Arbor, Michigan 48106). Doctoral dissertation, University of Southern California, 1969, iii + 269 p. Order #69-9032, \$10.00. Study of the early development of 27 congenitally blind children (15 non-hospitalized and 12 hospitalized), the emphasis being on basic emotional and cognitive growth.

The Scaling of Tactile Extent and Auditory Duration by Blind and Sighted Subjects, by Bell Travis Tunnell. University Microfilms, Inc. (see address above). Doctoral dissertation, University of Arkansas, 1969, 69p. Order #69-13, 755, \$10.00. The author used 32 congenitally blind students and 32 sighted students as subjects in a series of tactile and auditory tests.

Successful and Unsuccessful Vocational Rehabilitation of the Legally Blind: A Multi-Statistical Approach, by Lyle L. Knowles. University Microfilms, Inc. (see address above). Doctoral Dissertation, University of Southern California, 1969, iv + 83p. Order # 69-9028, \$10.00. The author found significant relationships between successful vocational rehabilitation and each of five variables—high degree of mobility, previous employment in a sophisticated occupation, having become blind at a comparatively early age, years of blindness, and age at time of rehabilitation.

The Effects of Normal Vision, Distorted Vision, and Sightlessness on Balance Performance, by Roch Roy. University Microfilms, Inc. (see address above). Doctoral dissertation, Florida State University, 1968, vii + 94p. Order # 69-11,324, \$10.00. Sighted subjects were used in various tests involving static and dynamic balance.

One Thousand Kilometres per Day, by Suresh C. Ahuja. *Blind Welfare* (The National Association for the Blind, Jehangir Wadia Building, 51, Mahatma Gandhi Road, Bombay -1, India), Vol. 12, No. 3, December 1970, pp. 6-13. Account of a visit in September 1970 by a six-man delegation from India to the USSR to study work for the blind in the Soviet Union.

—M.M.R.

Additional Listings

The Johanna Bureau for the Blind and Visually Handicapped (410 South Michigan Avenue, Chicago, Illinois 60605) has recently published a list of a dozen psychological tests that have been tran-

scribed into braille by the Bureau. Thermofom copies of the tests are available at five cents per page, plus a 10 percent handling charge. The list, which is available from the Bureau on request, includes prices and ordering information.

So You Have Glaucoma, by Everett R. Veirs. 2nd ed. Grune & Stratton, Inc. (381 Park Avenue South, New York, N.Y. 10016), 1970, 84p. \$5.75.

So You Have Cataracts: What You and Your Family Sould Know, by Albert E. Sloane. Charles C Thomas, Publisher (301-327 East Lawrence Avenue, Springfield, Illinois 62703), 1970, 98p. \$5.75.

The National Braille Press, Inc. (88 St. Stephens Street, Boston, Massachusetts 02115) has announced the following an-

nual registration fees for its publications: **Weekly News** (braille edition), \$2.00; **Our Special** (braille edition), \$2.00; and **Rehabilitation Teacher** (braille or inkprint edition), \$2.00.

Braille Book Bank Catalog, 1971-72, braille edition. National Braille Association Braille Book Bank (85 Godwin Avenue, Midland Park, New Jersey 07432), 50 cents.

Free Talking Book Services for Children With Learning Disabilities That Prevent Reading Print. A free brochure prepared by the Association for Children With Learning Disabilities in cooperation with the Library of Congress. Available on request from the Division for the Blind and Physically Handicapped, Library of Congress, 1291 Taylor Street, N. W., Washington, D. C. 20542.

News in Brief

■ The name of the Metropolitan Society for the Blind, Detroit, has been changed to the Greater Detroit Society for the Blind. The address (1401 Ash Street, Detroit, Michigan 48208) remains the same.

■ A library network service, utilizing amateur radio operators, was instituted earlier this year to help blind students and other readers to find books that they need, but have not been able to locate. A request for a book that cannot be filled by a reader's own library is turned over to the network and broadcast to "hams" all over the country who have volunteered to cooperate. Each member of the network then checks with local libraries. If the book is available, the library sends it on to the reader.

The first request was transmitted from Oklahoma City by Travis Harris, director

of the Oklahoma State Division of Visual Services, and Robert S. Bray, chief of the Division for the Blind and Physically Handicapped, Library of Congress, to Mr. Bray's office in Washington, D. C. Fifty-one ham operators in 13 states checked into the network on the first day and volunteered their services. The network is sponsored by the American Council of the Blind and was initiated at an open house celebration held at the Oklahoma Library for the Blind and Physically Handicapped in Oklahoma City.

■ Leland C. Sanborn, superintendent of the New York State School for the Blind, Batavia, has retired after 11 years at that post. Thomas A. Patterson, former dean of instruction at the Governor Morehead School, Raleigh, North Carolina, has been selected to succeed Mr. Sanborn.

■ A recent change in federal regulations stipulating that all nursing home care be classified as skilled has led to the approval of a plan in Pennsylvania to provide public assistance payments for intermediate care services for certain disabled persons unable to maintain themselves in their own homes. "For some patients," says Mrs. Helen Wohlgemuth, state secretary of the Pennsylvania Department of Public Welfare, "the focus of the intermediate care facility may be in preventing the need for skilled nursing home or hospital care, while for others the intermediate care facility offers a step in returning from a medical facility to community living." Such care, which is less intensive than that provided in a skilled nursing home, but more intensive than that provided in a custodial facility, is available to persons eligible for Old Age Assistance, Aid to the Disabled, and Federal-State Blind Pensions.



■ A new 16mm., color, sound film, entitled *Happiness Is a State of Mind*, has been released by Arkansas Enterprises for the Blind (2811 Fair Park Boulevard, Little Rock, Arkansas 72204). This 21½-minute picture, narrated by Hollywood star Roy Rogers, attempts to portray some of the values that a residential training program offers. Of interest to both laymen and professional personnel, it is available on loan without cost.

■ The U.S. Department of Defense, at the urging of the Blinded Veterans Association, has agreed, effective February 22, 1971, to issue *unlimited* commissary card privileges to all service-connected blinded veterans and to the widows of 100 percent blinded veterans who were eligible for such privileges.

■ Dr. Harry Best, professor emeritus of sociology at the University of Kentucky, died last spring in Lexington at the age of 90. A leading sociologist, author, and professor, Dr. Best was a recipient of the American Foundation for the Blind's Migel Medal for his outstanding history of work for the blind, *Blindness and the Blind in the United States*. He was the author of 11 other books on a variety of subjects, including the hearing handicapped, crime and criminal justice, the Soviet Union, and labor.

■ The Travel Information Center, a free public service established by Moss Rehabilitation Hospital (12th Street and Tabor Road, Philadelphia, Pennsylvania 19141) to aid handicapped travelers, provides comprehensive information on hotels, transportation, restaurants, entertainment, travel attractions, and additional contacts for further information to individuals and travel agencies. The hospital worked closely with travel experts around the world to develop the framework of the Travel Information Center and the hospital's volunteer organization will continue to collect and maintain the information files and answer inquiries.

■ A new center for teaching home management, personal adjustment skills, and communication methods to blind men and women is being opened by the Industrial Home for the Blind in its Brooklyn Service Center in Brooklyn, New York. The center, which includes a three-room "model apartment" and a study area, will serve as an experimental prototype for similar centers to be opened in other counties of the IHB service area.

Also in development is a new IHB Children's Center which will include the IHB Nursery School for Blind Children, the Rubella Program, classrooms, a speech and hearing center, a child psychology department, and other needed facilities. A new low vision clinic, in addition to the one already operated by IHB in nearby Nassau County, is also scheduled to open in the Brooklyn center.

■ A special braille-inkprint edition of a children's book, *The Bear Scouts*, produced by the Howe Press, Watertown, Massachusetts, has been selected by the Fifty Books Show Committee of the American Institute of Graphic Arts for exhibition in its 1970-71 collection of outstanding designs. Written by Stan and Jan Berenstain and originally published by Beginner Books (a division of Random House), this illustrated storybook-primer was placed in a spiral binding with the braille text, embossed on clear plastic sheets, inserted between the appropriate pages. The Fifty Books of the Year exhibit will travel throughout the United States and Canada and then, under the auspices of the United States Information Agency, on a world-wide tour.

■ Frampton Hall, a new school for multiply handicapped blind children within the New York Institute for the Blind, Bronx, New York, was dedicated on May 21, 1971. Named in honor of Dr. Merle E. Frampton, director of the New York Institute for 36 years and now its director emeritus, this education center features all types of training aids, including the newest in hearing devices, a custom-designed rhythm room, and specially trained therapists and teachers.

■ Carlos E. Laustrup, an outstanding blind businessman, died last winter in Iowa at the age of 91. Founder of the Laustrup Music Company, Mr. Laustrup was a member of the Iowa Association of the Blind and served for 22 years on the Iowa Commission for the Blind.

■ The Howard Home in Detroit, a 165-room housing facility used for the past 10 years as a retirement residence for Social Security and Old Age Assistance beneficiaries, has been turned over to the United Rehabilitation Centers of the League for the Handicapped-Goodwill Industries. It will, after extensive modernization, be used as a dormitory for the agency's handicapped clients and out-of-state referrals who require housing while in training and as the site for a variety of hotel-related training programs for clients.

■ The American Foundation for the Blind Personnel and Training Service, a clearing house for the exchange of information between job applicants and agencies and schools for the blind seeking qualified staff, was discontinued on June 30, 1971. Established in 1959, this referral program also included an extensive campaign to encourage trained persons in related fields to explore the possibilities of a career in the field of blindness. Although placement results indicate that this program has successfully filled a need in the field, public and private agencies and schools, preparation centers (colleges and universities), and other professional organizations have increasingly developed their own methods and resources for recruiting and referring qualified persons. Because of this and other reasons, it was decided that the Personnel and Training Service should be phased out.

Appointments

■ Tennessee State Services for the Blind: **Robert E. Farley**, supervisor of business enterprises.

■ National Center for Voluntary Action: president, **Edwin D. (Ted) Etherington**, former president of the American Stock Exchange and of Wesleyan University; member of the Board of Directors, **Garrison Meyer**, chairman of the President's Task Force on Aging and co-chairman of the National Task Force on Geriatric Blindness.

■ National Public Relations Council of Health and Welfare Services, Inc., New York City: **Seymour Stark**, executive director.

■ Kansas Department of Social Welfare, Division of Services for the Blind and Visually Handicapped, Topeka: **Mrs. Elaine P. Crowther**, supervisor of social services (replacing **Miss Elsie Bronson**, who is retiring after 25 years with the agency).

■ Phoenix (Arizona) Center for the Blind: **Allen Woody**, executive director.

■ Jewish Guild for the Blind, New York City: president, **John Mosler**, chairman, of the board and chief executive officer, Holmes Protection, Inc. and Bell Television, Inc.

■ National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, New York City: **Mrs. Belle Buchman Wiggins**, research associate.

■ U.S. Rehabilitation Services Administration: **Corbett Reedy**, deputy commissioner for program development; **Francis X. Lynch**, director of the Developmental Disabilities Division.

Awards

■ Handicapped Person of the Year, Illinois Governor's Committee on Employment of the Handicapped: **Dr. Richard Kinney**, executive vice president, Hadley School for the Blind, Winnetka, Illinois.

■ Louis Braille Award, Center for the Blind, Philadelphia: **Richard E. Hoover, M.D.**, vice-chief of staff, Greater Baltimore Medical Center, Baltimore, Maryland.

■ 1971 Scholastic Achievement Awards, Recording for the Blind, Inc., New York City: **Stephen L. Speicher**, DePauw University, Indiana; **Michael J. Freeman**, Reed College, Portland, Oregon; **Craig Werner**, New York University, New York City; and **Susan Lynn Woodard**, University of Miami, Florida.

■ 1971 Bartlett Awards, President's Committee on Employment of the Handicapped and the American Institute of Architects (for the design of outstanding buildings that are free of architectural barriers to the physically handicapped): Church of Our Divine Savior, Chico, California—**Quinn & Oda, Architects**, AIA, Berkeley; North Carolina National Bank Branch, Charlotte—**Wolf Associates Architects**, Charlotte; and the U.S. Pavilion, Japan World Exposition, Osaka—**Davis, Brody, Chermayeff, Geismar, DeHarak Associates**, New York City, and co-architect, **Ohbayashi-Gumi, Ltd.**, Osaka.

■ Francis Joseph Campbell Award, American Library Association (Round Table on Library Service to the Blind): **Mrs. Ranald H. Macdonald**, founder and honorary chairman of Recording for the Blind, Inc., New York City.

Coming Events

September 3-7 American Psychological Association, Washington, D. C.

September 19-23 American Academy of Ophthalmology and Otolaryngology, Las Vegas.

September 30-October 2 Third Conference for Canadian Educators of the Deaf and Blind, Montreal.

October 5-8 Audio Engineering Society, New York City.

October 6-8 American Association of Workers for the Blind, Rocky Mountain Regional Meeting, Helena, Montana.

October 6-8 New York State Federation of Workers for the Blind, Annual Conference, Albany.

October 11-13 National Rehabilitation Association, Annual Conference, Chicago.

October 11-15 American Public Health Association, Annual Meeting, Minneapolis.

October 12-13 American Association for World Health, 19th Annual Meeting, Minneapolis.

October 16-21 American Academy of Pediatrics, Chicago.

October 25-29 American Foundation for the Blind, 50th Anniversary Celebration, New York City.

November 7-12 American Congress of Rehabilitation Medicine, 48th Annual Session, San Juan, Puerto Rico.

November 17-20 American Speech and Hearing Association, 47th Annual Convention, Chicago.

November 29-December 3 White House Conference on Aging, Washington, D. C.

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

1972

March 19-25 Council for Exceptional Children, 50th Annual International Convention, Washington, D. C.

April 16-21 Ninth Pan American Congress of Ophthalmology, Houston.

April 17-21 European Society of Ophthalmology, Fourth Congress, Budapest, Hungary.

May 14-20 National Conference on Social Welfare, 99th Annual Forum, Anaheim, California.

May 15-19 National Braille Association, 12th National Conference (place undecided).

June 4-8 Special Libraries Association, Richmond, Virginia.

June 25-29 Association for Education of the Visually Handicapped, 51st Biennial Conference, Miami Beach.

July 26-August 2 International Council of Educators of Blind Youth, Fifth Quinquennial Conference, Madrid, Spain.

August 13-19 International Council on Social Welfare, 16th International Conference, The Hague, Netherlands.

August 27-September 1 International Society for Rehabilitation of the Disabled, 12th World Congress, Sydney, Australia.

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THE NEW Outlook FOR THE BLIND

October 1971 Volume 65 Number 8

Articles

- 241 Five Days at Vinton: The Birth of the
 American Foundation for the Blind
 Frances S. Koestler
- 261 The Theragnostic Group in a Rehabilitation
 Center for Visually Handicapped Persons
 Al Manaster
- 265 Listening Education: From the Kansas Project
 Claudell S. Stocker
- 271 Time, Money, and Students With Visual Limitations
 Glenn Leavitt

Departments

- 276 Editorial Notes
- 277 Current Literature
 Mary Maie Richardson
- 278 News in Brief

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Five Days at Vinton: The Birth of the American Foundation for the Blind—Part One

Editor's note: The following is an excerpt from a book now being written which recounts the history of work for the blind in the past half century, with special focus on the role of the American Foundation for the Blind which is marking its fiftieth anniversary in 1971. Reconstructed here are the events of the 1921 convention of the American Association of Workers for the Blind at which the Foundation was brought into being, with a sketch of the background which led to those events and an introduction to some of the dominant personalities who shaped both the convention's actions and the future directions of change and progress in the field of blindness.

Vinton, Iowa (population 3,000), Thursday morning, June 23, 1921.

The weather was the first thing on May Palmer's mind when she awoke just before the clock struck six. Moving swiftly to the bedroom window, she peered out at the tree-bordered expanse of grassy lawn. The leaves, she noted thankfully, were stirring in the early morning sunlight. Thrusting up the window as far as it would go, she took a deep breath. The scent of roses in full bloom dominated the mixed bouquet of floral odors wafting upward from the shrub-enclosed flower beds. There was still a trace of morning haze over the broad meadow that lay beyond the trees, but all the omens were favorable. It would be a fine summer's day.

Mrs. Palmer hummed cheerfully as she hastened through her toilet and joined her husband at breakfast. He had been up since day-break and had already completed a brief inspection tour of the grounds. Husband and wife faced a busy day; between breakfast and supper they would be greeting some 150 guests arriving for a five-day stay on the 30-acre campus of what was then known as the Iowa College for the Blind.

□ The occasion was the ninth biennial convention of the American Association of Workers for the Blind, and Francis E. Palmer, just completing his third year as superintendent of the school, was eager to meet his obligations as host to the fullest, plus a little bit more if possible. He knew that, for some of the delegates, attendance at the convention was a part of annual vacation, and he was determined to provide all the amenities of a stay in the country for men and women whose working days were spent in grimy urban surroundings.

Palmer, a man in his mid-fifties, was a relative newcomer to work for the blind. Before his appointment to the superintendency at Vinton, he had spent 30 years as teacher and principal in the Iowa public school system. In three short years at his present post, his experience as an educator had brought about important changes in the scope of the

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FRANCES A. KOESTLER

Mrs. Koestler, who has written extensively on many aspects of social welfare, is perhaps best known to the field of blindness for The COMSTAC Report: Standards for Strengthened Service, of which she was the editor.



Mrs. Francis E. Palmer

curriculum and in teaching methods for the 100 blind boys and girls who lived at the school nine months of the year. Before his retirement in 1939, Superintendent Palmer was to see the school's enrollment nearly doubled and its program acknowledged to be one of the most progressive in the nation. He was also to see the inaccurate designation "college" dropped, and the name changed to Iowa School for the Blind. (In subsequent years, there was to be yet another change: the name is now the Iowa Braille and Sight Saving School—a far remove from what the school was called when it was founded in 1853, the Asylum for the Instruction of the Blind.)

An amiable-looking, clean-shaven man of medium stature, with a high forehead topped by a neatly-combed wave of silvery hair, Francis Palmer had needed to call on all his powers of generalship to get the school's premises ready for the incoming delegates. Ever since the departure of the pupils for the three-month vacation that began on the first of June, a whirlwind of activity had been under way. Dormitories had been scrubbed and refurbished. Teachers had arranged to double up, or to board with families in town, so as to vacate their private rooms for use by the conventioners. Classrooms had been readied for committee meetings and group sessions. The school's chapel, which served as its assembly hall, had been brought to a gleaming state of polish; its piano and pipe organ were freshly tuned. All of the outbuildings—the gymnasium with its small swimming pool, the greenhouse, the industrial arts building, the hospital, the carpentry shop—had been put in apple pie order. Ditto the barns which housed the herd of Holsteins, the horses which worked in the grain fields, and the brood nests of the chicken flock.

The school's teachers, as well as its matrons, its farm hands, and its maintenance staff, had all been dragooned into service. Eunice Ruth Olsen, who taught handicrafts (and who was later to become Superintendent Palmer's daughter-in-law when she married his son, Eber) cleaned bathtubs and helped out in other domestic chores. May Palmer worked out menu plans to make good use of the vegetables freshly picked from the school's own fields. She also took particular pains with her own private quarters on the second floor of the 50-year-old main building, knowing that when the delegates met in plenary sessions, the superintendent's apartment, which contained an entrance to the chapel balcony, would be used as a corridor.

By mid-afternoon the school's horse-drawn carryall had made several round trips to the railroad station, a mile east in downtown Vinton, to meet the trains arriving on the Rock Island Railroad's branch lines running north from Cedar Rapids, south from Minneapolis and east from Sioux City. Now and again a dusty automobile chugged through the school's gate, its occupants having gamely braved what Iowans called the "gumbo" of their dirt roads. The automotive age was still in its infancy, and there were as yet few paved or graveled roads in the state of Iowa.

Palmer and his staff were not expected to cope single-handedly with



Francis E. Palmer



Entrance to Main Building of the Iowa School for the Blind

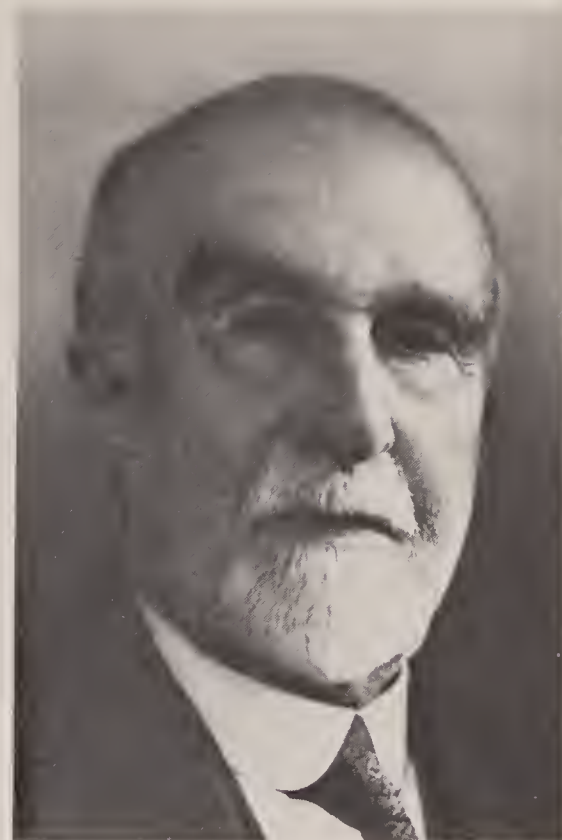
the reception and registration of the delegates. Key officers of the American Association of Workers for the Blind had arrived a day earlier. The most important of these—and the man on whose shoulders rested the responsibility for leading this 1921 convention to the accomplishment of a single, overriding purpose—was a courtly Southerner, Henry Randolph Latimer, then completing his first two-year term as president of the Association. The organization's first vice-president, Sherman C. Swift of Toronto, had not been able to make it to Vinton, but its second vice-president, Kate M. Foley, had come east from San Francisco, and the secretary, Charles B. Hayes, had arrived from Boston. Of the four, Hayes was the only sighted person: Latimer, Swift, and Miss Foley were blind.

The opening session that Thursday evening was limited to pleasant formalities. Palmer made a short speech to greet the delegates; a prayer was intoned by the pastor of the Vinton Presbyterian Church; "America" was sung to piano accompaniment; there were welcoming addresses by the mayor of Vinton, the president of the Iowa State Board of Education, and the speaker of the Iowa House of Representatives, to which graceful responses were voiced by Latimer for the American Association and by F. W. Johnston, vice-president of the newly formed Canadian National Institute for the Blind, on behalf of the Canadian membership.

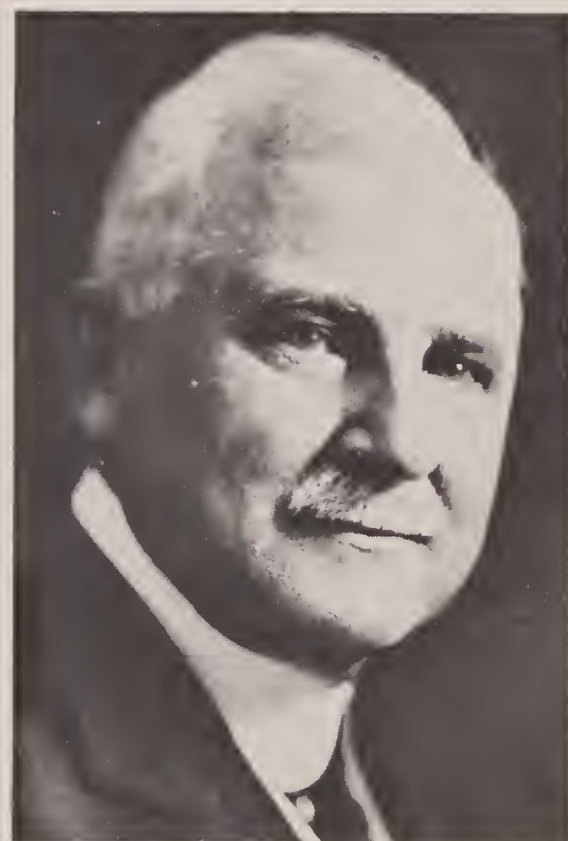
At the reception which followed, the delegates sipped lemonade and fruit punch and nibbled at freshly baked cookies as they milled around, renewing old friendships and meeting some of their newer colleagues. Wives of delegates exchanged news of family and children. Among the professionals, the latest intramural gossip was aired; here and there, delicate negotiations were begun over possible job changes.

Small clusters formed around a few men who, by virtue of entrenched position or strength of personality, were the acknowledged movers and shakers in work for the blind. Prominent among them were the Big Three in education: the superintendents of the largest and oldest-established residential schools for the blind. On hand in Vinton for this 1921 convention were 60-year-old Edward Ellis Allen of the Perkins Institution for the Blind in Watertown, Massachusetts; Olin H. Burritt, 54, of the Institution for the Instruction of the Blind in Overbrook, Pennsylvania; and Edward M. Van Cleve, 54, of the New York Institute for the Blind in New York City. Sometimes sardonically referred to as the Great Triumvirate, the heads of these three pioneer institutions had long dominated work for the blind which, for nearly a century, had been largely focused on the education of blind children. Still a good many years in the future was the shift in emphasis that was to direct a substantial share of the nation's resources toward meaningful service for blind adults.

The American Association of Workers for the Blind was not the principal power base of Allen, Burritt, Van Cleve, and their colleagues in education. They had a separate national body, the American Asso-



Edward Ellis Allen



Edward M. Van Cleve

ciation of Instructors of the Blind, which in those days met in the even-numbered years, leaving the odd-numbered for the biennial conventions of the AAWB.

□ In 1921—as during the preceding decades—the American Association of Instructors of the Blind was the senior group in every sense. Founded in 1871, it antedated the AAWB; more importantly, because it had a single focus, it had been a cohesive group from the start. In an era when virtually all public expenditures for the blind were devoted to education and thus funneled through the schools for blind children, the schools and their superintendents had gained and held a commanding position. As the undisputed experts on blindness, they served as the foremost spokesmen on all issues concerning the blind. Legislatures called upon them for counsel, the public looked to them for leadership, and the generations of blind children educated in their schools seldom wished, or dared, to challenge the authority of the superintendents.

□ The American Association of Workers for the Blind, on the other hand, had been the victim of several false starts before defining a workable role for itself. It had begun, in point of fact, with a purely educational goal. As described by Norman Yoder in his official history of the association:

In 1895, at St. Louis, Missouri, the forerunner of the AAWB came into being. At that time, a group of individuals who were concerned about educational opportunities for the blind formed the American Blind People's Higher Education and General Improvement Association, and for several years thereafter this group met to consider methods by which blind and visually impaired persons might have an opportunity to advance themselves in the society of those days....

These early pioneers advocated: (1) a specialized college to serve the blind; (2) governmental scholarships for the blind; (3) non-segregated admission to existing institutions of higher learning; and (4) the annex theory, which was a combination of the first two suggestions, namely that scholarships be provided and a segregated unit be established in an existing college or university specifically designed to meet the needs of the blind.¹

By 1905, the group was ready to admit the failure of its efforts to interest federal or state officials in financing any such program. Simultaneously, however, it recognized that there were many other problems it might usefully tackle in the realm of "general improvement"; it had already begun to zero in on some of these. At the 1905 convention the group changed its name to American Association of Workers for the Blind and formulated a new philosophy: "We ask that blind persons be given an opportunity to earn their own living. We do not approve any system to pauperize them. We are not asking for them a degrading pension, or the abstract glories of higher education."

With this changed and broadened focus, Yoder wrote, the conferees then included on their agenda such items as "industrial education in schools for the blind and employment of the blind in trades, in skilled labor areas, in institutional areas, and in professional areas. Much of the

American Association of Instructors of the Blind

Origins of the AAWB

Formulating a new philosophy in 1905

Priorities

conference time was devoted to the continuing problems of higher education, standardization of a tactual reading system, and continuing expressions of concern for the older blind person." At the next biennial convention, four major committees were designated to deal with the ongoing problems of higher education, federal pensions, a uniform system of embossed type, and the prevention of blindness. The delegates also debated questions of boarding homes and other housing arrangements for blind adults, nurseries for blind babies, and field service for adults in the form of home teaching.

In contradistinction to the AAIB, which restricted its membership to school officials and teachers, the AAWB maintained open membership rolls and encouraged the participation of interested laymen as well as all categories of personnel engaged in all types of work for blind persons of all ages. This wide-open membership policy naturally encompassed the educators who were AAIB members; most administrators and supervisors of the schools for the blind belonged to both associations.

In a sense, the two associations constituted a kind of bicameral parliament, with the AAIB in the role of the smaller, more exclusive upper house and the AAWB in the role of the more popularly representative lower house. It became the custom for most far-reaching issues to be debated twice: one year at the AAIB convention and the next year at the AAWB meeting, or vice versa. As the mutuality of some of these issues came to be recognized, the two associations established joint committees. Notable among these was a joint body that had been in existence since 1915 to seek a solution to the troublesome question of a standardized tactual system for finger readers. This was the Commission on Uniform Type, whose history will be recounted in later chapters.

□ At Vinton, that summer of 1921, the major agenda item before the American Association of Workers for the Blind was one which had been considered by the Instructors the previous year. This was the question of forming a new kind of national organization that might be able to accomplish, in a systematic and coordinated way, those objectives that were clearly beyond the reach of loose-knit membership groups that got together for a few days every two years.

There was not a single delegate at the Vinton meeting who did not have a direct stake in the outcome of this question. Every organization engaged in work for the blind, from the long-established residential schools to the smallest and newest local voluntary agencies, stood in need of the kind of coordination and centralized research and leadership thinking that could only be provided by a strong national body. Not too strong, some of the delegates demurred privately: there must be no interference with local dominion. But even the doubters were persuaded that, with suitable safeguards, such a national body could be servant rather than master, and that it could prove to be a convenience in many ways.

AAIB and AAWB

Creating a National Body

The need was recognized

By and large, the major strands in work for the blind were well represented at Vinton. Key school people were on hand: in attendance, in addition to the Great Triumvirate, were a second echelon of educators, many of whom wielded considerable influence. Among them were the superintendents of the schools for the blind in Jacksonville, Illinois, Baton Rouge, Louisiana, and Macon, Georgia, plus the superintendent of one of the dual schools which still existed in various parts of the country: the Virginia School for the Deaf and Blind. Plus, of course, Francis Palmer of the Iowa school. Latimer himself was a school man: at the time of the convention, he held the position of head teacher of the Maryland School for the Blind. Latimer's boss, Superintendent John F. Bledsoe of the Maryland school, was there as well.

Present, too, were torch-bearers of the new (ultimately to become the dominant) direction of education for blind children. Notable among these leaders of day school education were two men: 50-year-old John B. Curtis of Chicago, who had pioneered by establishing the nation's first classes for blind children in public schools, and Robert B. Irwin, a dozen years his junior, who had introduced Curtis' methods in Cleveland and other cities in Ohio. In 1921, Irwin bore the title of supervisor, Department of the Blind, Cleveland Board of Education.

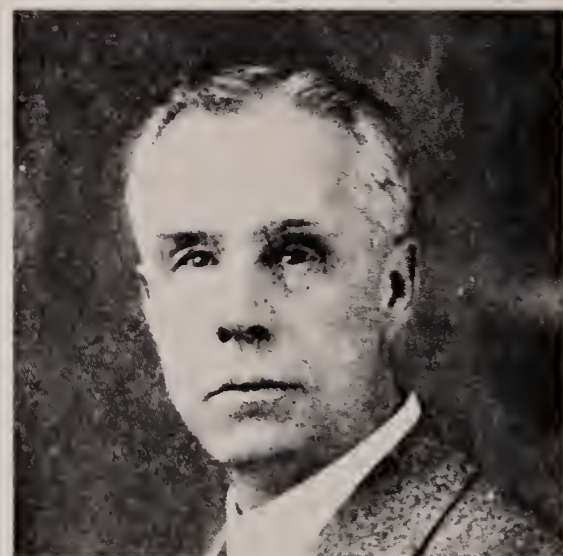
The steadily expanding diversity of work for blind adults was implicit in the range of interests represented by other delegates.

There was Eben Morford, superintendent of the Industrial Home for the Blind in Brooklyn, New York, a voluntary agency specializing in vocational services through sheltered workshops and industrial placement programs. There was Charles W. Holmes, a Canadian educated at the Perkins Institution, who had left his post with the Massachusetts Commission for the Blind to accept a five-year contract to organize the industrial and other programs of the newly formed Canadian National Institute for the Blind. There was young Joseph F. Clunk, then executive secretary of the Youngstown (Ohio) Association for the Blind, who had already given a convincing preview of the extraordinary career he would subsequently pursue in placement of blind industrial workers side by side with the sighted.

The field of social work, rapidly coalescing into a profession, also drew its share of practitioners to Vinton. Social services of the kind familiar to the contemporary reader were still in a formative stage where blind people were concerned, but some of the potentials were already being explored. Prominent among the trail-blazers in this area of work was Calvin S. Glover, secretary of the Cincinnati Association for the Welfare of the Blind, who was slated to report to the convention on behalf of its Legislative Committee. Present, too, was "Colonel" L. L. Watts, executive secretary of the Virginia Legislative Commission for the Blind, an acknowledged leader in demonstrating the ability of a state agency to deliver a wide range of services to blind adults and children. Four other state agencies were represented at Vinton: Massachusetts, California, Michigan, and Missouri. As of 1921, there existed only



John B. Curtis



Eben P. Morford



Charles W. Holmes

a handful of such state commissions; it was to take three full decades before virtually every state in the union had a comparable body.

Home teaching, which was then the major service given by most state agencies, was personified by Kate M. Foley of California, probably the nation's best-known exponent of this type of work. Miss Foley, a middle-aged woman who had been born lame as well as blind, was an eloquent writer and speaker on the subject of how significantly the visiting teacher could enrich the lives of homebound blind adults. The personal popularity engendered by her warmth and sincerity was reflected in her stature as a vice-president of the AAWB.

A number of voluntary agencies had also sent delegates to Vinton. In addition to Glover of Cincinnati and Morford of Brooklyn, program participants included both the lay president and the executive director of the Chicago Lighthouse, the executives of the Cleveland and Minneapolis Societies for the Blind, respectively, and the head of the Illinois Society for the Prevention of Blindness.

On the program to lead a round table on embossed literature for the blind were two women who had already made their mark in library service and were to go on to even more notable accomplishments in the years ahead. One was Gertrude T. Rider, head of the Service for the Blind of the Library of Congress; she had initiated the braille transcribing service of the American Red Cross, thereby launching the priceless volunteer service which continues to this day. The other was Lucille A. Goldthwaite, in charge of the Department for the Blind of the New York (City) Public Library. It was to be 10 years before the federal government would take responsibility for supplying blind adults with reading matter; in 1921, when sightless readers were dependent on the private collections of the larger local libraries, the operation headed by Miss Goldthwaite represented a major source of embossed literature for finger readers in more than a dozen states.

Three men and two women who were on the program at Vinton wore name badges that identified them with a new adjunct to work for the blind: the Federal Board for Vocational Education.

A year earlier, President Woodrow Wilson had signed the Smith-Fess Act which authorized the expenditure of \$750,000 in the 1921 fiscal year for a joint federal-state program of vocational rehabilitation for the physically handicapped. This civilian program was put under the direction of the Federal Board for Vocational Education, which two years before that had been given charge of similar measures on behalf of disabled veterans. The delegates were curious to hear what the board's vice-chairman, James P. Munroe, would have to say in his scheduled address on "What the United States Government Is Prepared to Do for the Civilian Blind." They would also listen with interest to the reports given at succeeding round tables by two of the federal board's vocational agents who were operating at the state level—Florence Birchard in Massachusetts and Ada Turner in Wisconsin—as well as to the talks to be made by Lewis H. Carris, the federal board's assistant director of in-



Joseph F. Clunk



Kate M. Foley



Lucille A. Goldthwaite

dustrial rehabilitation, and Arthur E. Holmes, who bore the title of supervisor for the blind in the board's Washington office.

The delegates were not overly sanguine. The Federal Board for Vocational Education's work with war-blinded soldiers had thus far been disappointing. There was little reason to think that civilians would fare much better. Few states had passed the necessary legislation that would enable them to take advantage of the federal funds made available under the Smith-Fess Act. Most discouraging of all was the fact that in those states that did have enabling laws, many blinded veterans were being more or less arbitrarily classified as "nonfeasible" for vocational rehabilitation.

These doubts proved to be well founded. As it turned out, blind people gained virtually nothing under this federal law in its original form; it was to take 23 years and another world war before the Barden-La-Follette amendments gave the Vocational Rehabilitation Act the necessary sinews to make a real difference in their lives.

A similar time lag was to characterize the once bright hopes that had been entertained over the outcome of the first large-scale experiment in personal and vocational rehabilitation of blinded soldiers at Evergreen. This was the name of a handsome estate on the outskirts of Baltimore that had been loaned to the Army, early in 1918, for use as a hospital for war-blinded servicemen. It was subsequently turned over to the joint control of the Federal Board for Vocational Education and the American Red Cross, at which time its status changed from an Army hospital to the Red Cross Institute for the Blind. A few months after the Vinton meeting, a third change of administration was to take place with the transfer of Evergreen to the jurisdiction of the United States Veterans Bureau.

As will be seen in later chapters, much was wrong at Evergreen. According to one historian, this rehabilitation center for the war-blinded "never seemed to find itself or to be able to fulfill adequately its stated purpose."² Although Evergreen was not phased out of existence until 1925, its fundamental weaknesses were already apparent in 1921. Nevertheless, the delegates at Vinton looked forward zestfully to a scheduled talk on "What We Have Learned from Our War-Blinded Which Can Be of Use in Our Work with Civilian Blind." It was not so much the subject that intrigued them as the speaker, a remarkable man named Charles F. F. Campbell, easily the most colorful figure in work for the blind and one of the most popular. Anything that Charlie Campbell had to say, the delegates knew, was sure to be entertaining, challenging, perhaps even outrageous, but nonetheless worth hearing.

These, then, were among the 145 assorted personalities who, following the reception that Thursday evening in June of 1921, strolled along the well-raked gravel paths of the Iowa College for the Blind to enjoy the fresh country air before retiring for the night. We will meet most of them again as the panorama of the next 50 years unrolls.

* * * * *



Evergreen



Charles F. F. Campbell

In the darkened bedroom assigned to the AAWB president and his wife, Jane Latimer slept soundly while her husband, settling himself in a chair by the window, got into mental gear for the day to come.

Taking care not to let them rustle, he took the batch of stiff sheets on which he had punched out, in the tactual type known as New York Point, the presidential address he was to deliver the next morning. As he ran his fingers lightly over the raised dots, he framed a silent prayer of thankfulness that nothing he had heard thus far necessitated a change in strategy. He could pinpoint the dozen or so people of power who were capable of blocking the proposal he would be putting before the convention; it was a stroke of good fortune, he reflected, that most of them had chosen not to attend the meeting at Vinton.

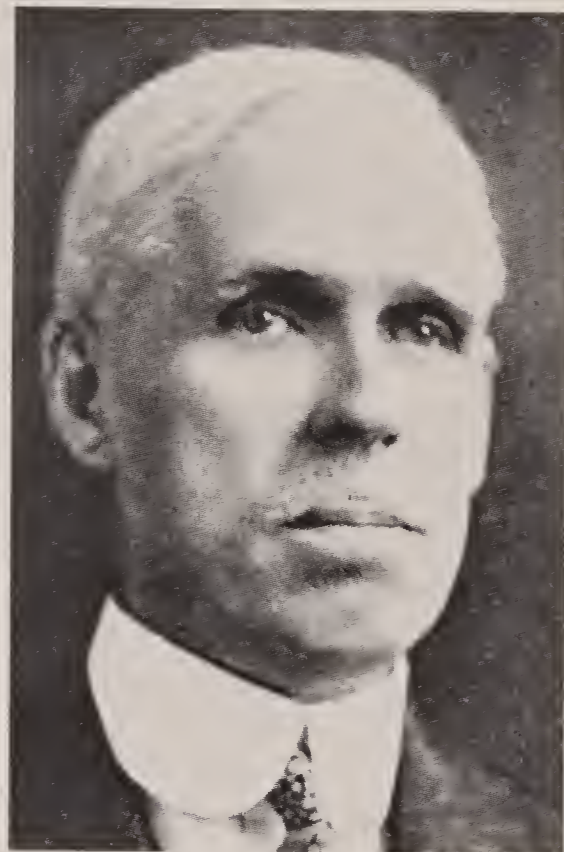
Through the open windows, Latimer could hear occasional bursts of laughter. No doubt some of his fellow delegates had come to Vinton with a bottle or two of pre-war stuff tucked into their luggage. Although Prohibition had been the law of the land for more than a year, not everyone took it seriously, and blind people were no different from others in their feeling that alcoholic conviviality was a hallowed tradition of all conventions.

If only, Latimer mused, running his hand over the smooth wings of snowy hair that framed his white-moustached face—if only this essential sameness could be accepted in all aspects of life! If only sighted people could be led to understand that blind people were not a breed apart, that they shared the same hopes, the same needs, the same strengths and weaknesses as everyone else! It would require a revolution in popular thinking, and that revolution, he recognized, would have to begin with blind people themselves and with those who were professionally involved in work with them. Basic changes were overdue in the patterns that governed both the philosophy and the methodology of organized work for the blind. His own experience bore testimony to this.

Henry Randolph Latimer, born in rural Prince George County, Maryland, in 1871, came from a family whose English forebears had arrived on American shores in 1667. His blood ties with the Maryland gentry were important to him: in the autobiography he later wrote, he devoted 65 pages to tracing his genealogy and penning biographical sketches of the prominent men and women whose direct or collateral descendant he was.

Henry was one of six children brought up on the family acres in an atmosphere of genteel poverty. The Latimers had lost much of their substance during the Civil War, and while they retained their land, there was little cash available. Both Henry and his sister, Lilian Emmeline, were born with poor vision. Until he was 10 years old, however, he lived at home.

Though I was as blind as a chicken by night [he wrote in an autobiographical sketch published in 1914] and had very little sight by day, I took my



Henry Randolph Latimer

chances with my four brothers on the farm, doing my share of everything that came to hand, chopping wood, feeding cattle, and even rounding up stock in the pasture and milking as many as five cows at one sitting. . . . At six years of age, I entered the local public school, where, for four years, I kept abreast of my classes, leading them in mathematics. I did my work with crayon, soapstone and lead pencils, pen and ink, like other boys, with the exception that the lines on foolscap paper were made much heavier for me to see. Books in very bold print, of the pictorial type, were used to teach me to read. My lessons were regularly taught me at home by my mother or aunt, the latter being the local school teacher. Upon her removal to a school too remote for me to attend daily, my parents, with much reluctance, entered me at the Maryland School for the Blind, in Baltimore, in 1881.³

□ At this school, which his sister also soon entered, Latimer remained for nine years as a student and, after graduation, for 30 years as a staff member. From his first staff assignment, that of foreman of the school's mattress and caning shop, he moved into teaching in the literary department of the school's separate Department for Colored Blind and Deaf, where he served for 12 years before being transferred back to the main school. There he rose, by gradual stages, to the position of head teacher.

Simultaneously, he pursued his own education. In 1892 he matriculated at Illinois Wesleyan University as a non-resident student in a correspondence course leading to a Ph.B. degree. Because he had little time to study (and also because, in 1894, he suffered an attack of typhoid fever which not only turned his hair white but destroyed his remaining vision), it took him seven years to complete the work at Illinois Wesleyan. A year after receiving his bachelor's degree, he took a summer course at Harvard which earned him a certificate in Theory and History of Education.

The introduction to a wider world which Latimer gained through his studies led him to perceive the weaknesses that resulted from educating children in the cloistered atmosphere of the traditional school for the blind. "The pattern," according to C. Warren Bledsoe, whose father was superintendent of the Maryland School for the Blind, "was one of academic paternalism"—a pattern that tended to stifle the impulse toward independent thought and action. "More than any other worker for the blind of his generation," Bledsoe was to write, long after Latimer's death, "Latimer shared. . . awareness of the difficulties encountered when dealing with strong, wise, kind, paternal people who were also schoolmasters, accustomed to being obeyed."⁴

The habits of dependency inculcated in such a milieu were hard to overcome in later life, Latimer found, when, from his base at the school, he reached out into adult work and instigated formation of the Maryland Association of Workers for the Blind to promote rehabilitation and employment of the state's blind men and women. With the gentle persistence that characterized everything he did, Latimer managed to make impressive headway in this effort. It was his success here, added to the

Latimer's Education and Professional Experience

growing reputation that accrued as a result of his effective participation in several national projects, that had brought him to a major crossroads in his career. On his return home from Vinton, Latimer would pack his belongings and leave both Maryland and the field of education to enter full-time work for the adult blind as the new executive secretary of the Pennsylvania Association for the Blind. In this capacity he would be moving to the state-wide association's Pittsburgh headquarters.

No doubt, as Latimer sat musing by the window that fragrant June night, some of his thoughts concerned the impending changes in his own life. But, with the conscientiousness that was the habit of a lifetime, he resolutely turned his mind back to the task that lay immediately ahead.

□ At 9:40 the following morning he was scheduled to take the podium and deliver his presidential address. In it, he would present not only a proposal but a detailed plan—complete with drafts of a certificate of incorporation, a constitution, and a set of by-laws—for the creation of a new national body to be known as the American Foundation for the Blind. He would ask the delegates to endorse the proposal, to enact the enabling resolution, to adopt the constitution and by-laws, and to appoint the incorporators who would bring this new body into legal existence.

Latimer had few misgivings over the outcome. His preparatory work had been thorough. He would be springing no surprises. The delegates had known for many months that this 1921 convention would center on a single theme.

The Executive Committee of the American Association of Workers for the Blind [read the carefully phrased notice that had been sent out with the preliminary program for the Vinton meeting] is responding to what it senses as the general wish of the most thoughtful workers for the blind of the United States and Canada. There is in their minds a more or less definitely defined idea or feeling that there should be in work for the blind some sort of General Foundation representative of and responsive to every important phase or branch of the profession. . . . It is very essential therefore that opportunity should be given for the fullest possible discussion of the question and it is to this end that the committee ventures to depart from the usual mixed program and submit one bearing almost entirely upon the topic uppermost in the public mind.⁵

□ In his presidential address Latimer would detail the steps he had taken to translate these tentative ideas into concrete form, and the precautions he had observed in insuring the soundness of his proposals for such a foundation.⁶

We were neither reckless nor hasty in our manner of approach [his text read]. In the first place, your president made it his personal business to ascertain, as far as the time and means at his disposal admitted, whether the profession generally, and certain persons in particular, would lend their support to such a program. In this connection it is gratifying to report that, while some skepticism

A Detailed Plan Was to Be Presented to the Convention

Background of the Plan

as to the outcome was expressed, virtually everyone approved the undertaking and bade us Godspeed in the effort.

In the second place, it seemed advisable that every possible precaution should be taken to avoid wrangling, destructive criticism, and other unprofitable discussion here at the convention. To this end, in assigning the topics for discussion, each speaker was asked . . . to point out in what respect his particular branch of the work could be advanced by the cooperation of a properly organized general agency in work for the blind.

Moreover, his text continued, "it seemed something more concrete still must be done if any real organization was to result." A constitution and by-laws had therefore been drafted and circulated, first to the Executive Committee and then to

as many other persons as the time and means at hand permitted, including Messrs. E. E. Allen, Charles F. F. Campbell, W. G. Holmes, R. B. Irwin, M. C. Migel, E. P. Morford, J. F. Bledsoe, C. D. Chadwick, W. I. Scandlin, O. H. Burritt, E. H. Fowler, C. W. Holmes, E. M. Van Cleve, T. S. McAloney, G. S. Wilson, Dr. James Bordley, Miss Susan B. Merwin, and Lady Francis J. Campbell. The criticisms and suggestions received from these various sources were unusually helpful . . . and [in their light] the articles were redrafted and submitted for proper legal advice to my lawyer, Mr. W. Howard Hamilton of Baltimore.

It was Mr. Hamilton, a prominent attorney with influential business and social connections in Maryland, who had drafted the necessary papers in proper legal form, "giving free of charge both his own services and those of his office force."

In addition to all of these precautions, Latimer would go on to tell the assemblage, "in order that no false step . . . should be taken, and in order that the sanest available counsels might prevail," a conference on the whole question had been held in May in New York City. He listed those in attendance, swelling the impressive roster he had already recited with additional prestigious names: Lewis H. Carris, Mrs. Rider, Miss Goldthwaite, and Grace S. Harper, executive secretary of the New York State Commission for the Blind.

Latimer's peroration would be characteristic of the peacemaking propensity that had won him the confidence and support of so many warring factions. It was also a fair sample of his somewhat overblown literary style:

And now, my dear friends, why have we come to Vinton? To suspect and to discount, to wrangle and to backbite, to circumvent and to destroy? Not so, I pray you, most emphatically not so! Unless I am entirely wrong in my diagnosis of the human heart, we have come here prepared to fraternize and to counsel, to confide and to commend, to cooperate and to construct; and, by the grace of God, we shall go forward to the consummation of one of the greatest achievements yet known to work for the blind.

The low-keyed tone of Latimer's presidential address would prove to be precisely right. There had been enough by way of rousing oratory in the past. A year earlier, at the twenty-fifth biennial convention of the



Sir Francis and Lady Campbell



Grace S. Harper

American Association of Instructors of the Blind, L. W. Wallace, director of the Red Cross Institute for the Blind at Evergreen, had delivered a blunt, hard-hitting address in which he spared his hearers nothing. Calling for the creation of a national vocational institute for the blind, Wallace had lashed out in many directions.⁷

The work being done for the blind in the United States today is sadly deficient [he began] because of the lack of an authoritative central organization to coordinate and to crystallize and to stimulate the work. This is evidenced by the wide diversity in the methods of attack and concept; by the great lack of uniformity in character of and functions of the agencies dealing with the problem, and by the total absence of properly delegated agencies in some localities. . . . The majority of the agencies dealing with the question of the blind have been so limited in authority, in means and in trained personnel that they have not realized the full possibilities.

This situation, he said, could be overcome if there were a national body composed of three major arms. One would be a Bureau of Information "to collect, codify and to disseminate the most authoritative information to be had in the world on all questions pertaining to the blind."

The second arm, he continued, would be a Bureau of Research "liberally financed and . . . unhampered in scope of activity, in authority of action," that would investigate the education of blind youth, that would survey the occupations already open to the blind and identify others with practical possibilities in industry, commerce, and agriculture, that would, in general, serve as a living laboratory "in accord with the best practice and the most current tendency in . . . practically every important and progressive phase of human activity."

Most of Wallace's fire had been reserved for the subject of education. Outlining the need for a Bureau of Education as the third arm, he asserted:

There has been a tremendous and woeful lack of education, in its broadest sense, as pertains to all phases of blind work. In a very large degree, this lack of education accounts for the present situation. As it appears to us, there are four elements of such education. First—The education, or the training, of the workers for the blind. This includes executives, teachers, field workers, and placement personnel. Second—The education of the blind. Third—The education of the employer. Fourth—The education of the public as such.

The kind of national body he advocated "could do no more worthy piece of work than to offer intensive and high-grade courses of instruction, suitable for executives, teachers, field workers, and placement personnel." Special attention, he emphasized,

should be given to the training of the placement personnel. . . . To place and to maintain a blind person in a position is one of the most trying and difficult phases of the entire problem. . . . Very often the placement or the employment agent has been a glaring example of misplacement himself. In many, many instances he has been a gross misfit because of the lack of proper training, un-



L. W. Wallace

suited personality, inexperience, and limited knowledge of the factors involved. Being deficient in all these essential elements, many mistakes have been made which have been most disastrous to the individuals involved and to the cause. Until this evil is corrected and until the placement personnel is of the right character and has the requisite training, the blind will continue to have difficulty in securing and maintaining employment.

□ If Wallace was hard on workers, his judgment of their clients was even harsher:

Harsh Judgment of Clients

The possibilities of vocational activity for the blind will never be realized until there is a change of attitude on the part of many of the blind themselves. . . . The attitude that many of the blind assume or acquire, or it may be a part of their natural psychology, is one of the greatest drawbacks to their development and opportunity. What do I mean? It is this, they are supersensitive, critical, and unappreciative. They lack ambition and determination. They lack the spirit to will, to do. They are too prone to accept and not to earn. . . . It should be the function of a national institute to correct this condition.

There is not much use in attempting the education of the employer or the public at large, he concluded, "until our own house is in order." For a national body to achieve such order,

it must have large financial support; it must be unhampered in its policies and administration; its personnel must be keen, intelligent, and aggressive; it must have the loyal backing and constructive assistance of all agencies for the blind; it must have freedom of action; it must be free of unjust and destructive criticism and petty jealousy and in their stead have the sympathetic and cordial active support of all those interested in the cause of the blind.

Perhaps it was because Wallace had stepped on so many toes. Perhaps it was because his hearers interpreted his remarks as an angry response to the criticism that had been so freely leveled at Evergreen. Perhaps it was because Wallace was an outsider (when his appointment as general manager of Evergreen was announced by the Red Cross, the *Outlook for the Blind* had blandly identified him as "late of Purdue University, and one of the best railway experts in the United States").⁸ Whatever the reason, Wallace's speech in 1920 had brought about passage of a resolution whose guarded wording hardly constituted a clarification call to action.

□ "Resolved," read the resolution adopted by the American Association of Instructors of the Blind at the conclusion of its 1920 convention, "that this Association would welcome the cooperation of some wisely organized agency for assisting and improving the vocational education and the employment of the blind of this country, such as has been outlined at this convention by Director Wallace of the Red Cross Institute for the Blind."

Resolution Passed by AAIB in 1920

What Latimer had done, in preparing the material on which the American Association of Workers for the Blind would act, was to incorporate the affirmative substance of Wallace's talk while omitting the finger-pointing. Latimer had also drawn for ideas on two other docu-

ments, he acknowledged in his presidential address: a paper by Robert B. Irwin outlining the scope of a national research bureau, and a sketch of a clearing house that had appeared over the signature of M. C. Migel.

The drafts circulated to the delegates of the proposed constitution and by-laws set forth an operating structure for the American Foundation for the Blind consisting of the very same three bureaus that Wallace had recommended. Their scope, however, had been broadened to cover wider ground than vocational education and employment. Articles VII, VIII, and IX, which spell out the respective functions of the three bureaus, are worth recording [see page 256]. Their wording remained unchanged for 30 years. Even thereafter, when a revision of the by-laws in 1951 eliminated the provisions for specific bureaus, the substance of the Foundation's purposes, although modernized and rephrased in more general terms, did not (and does not) differ in essence from what was set forth in these three articles of the original 1921 document.

There must have been some at Vinton who gulped a little at the vast canvas laid out for an organization that had yet to accumulate a dime's worth of assets. But of much greater interest to the delegates than what the new organization would do was the question of who would control it. This thorny issue had been carefully spelled out in Article V of the by-laws.

The Foundation would have a corporate membership body which would meet annually to elect a governing body of 15 trustees, 10 of whom would be nominated by, and represent, special interest groups: 1. Board and staff members of residential schools for the blind; 2. Supervisors and teachers of public school classes for blind and partially-sighted children; 3. Librarians for the blind; 4. Heads of embossing plants which produced literature for the blind; 5. Persons engaged in prevention-of-blindness work; 6. Board and staff members of state-wide associations and commissions for the blind; 7. Board members and superintendents of workshops and industrial homes for blind adults; 8. Trustees and executive officers of city-wide associations and clubs doing work for the blind; 9. Placement agents, field officers, home teachers, and social workers in the employ of recognized organizations for the blind; 10. Heads of institutions and agencies doing charitable work for the blind, "including agents for dispensing special relief."

As to the remaining five trustees, two were to be nominated by the membership at each convention of the American Association of Instructors of the Blind, and three by the membership of the American Association of Workers for the Blind.

How to structure the governing board in such a way as to satisfy all and overlook none of the major departments of work for the blind had been Latimer's most difficult problem. The two dozen people he consulted in advance had offered differing views, so that he found himself walking a very shaky tightrope.



M. C. Migel

From the By-Laws of the American Foundation for the Blind, Inc. (1921)

Article VII. Bureau of Information and Publicity.

(a) The Bureau of Information shall assemble, systematize and disseminate all available data in any way relating to work for the blind and particularly:

(1) Data relating to workshops, industrial homes, commissions, associations, and similar institutions and their respective objects, organizations, administrations, course of training or procedure and results.

(2) Data relating to educational institutions, as private and state, residential and day for youth and adults; their aims, organizations, administrations, curricula and results.

(3) Data relating to lines of employment and vocations followed by individual blind and partially blind persons, and to seek out new opportunities for self-support.

(4) Data relating to well established methods of instruction for emulation and also relating to methods found unsuccessful or ill-advised.

(5) Data relating to legislation affecting the blind and partially blind.

(6) Data relating to all styles and varieties of embossed type, etc.

(7) Data relating to any other department or classification of effort on behalf of the blind and the partially blind, including the deaf-blind.

(b) This bureau shall either issue an ink print and an embossed magazine devoted to work for the blind and the partially blind or avail itself of the services of such periodicals already in existence, in which latter case this bureau is authorized to enter into appropriate agreements with the management of any such periodicals.

Article VIII. Bureau of Research.

(a) The Bureau of Research shall ascertain, develop and standardize, by comparison, experimentation and otherwise, the best methods of instruction, kinds of apparatus and appliances, organizations, procedures, etc., for the various lines of work for the blind and the partially blind, and particularly:

(1) The best curricula for a given type of school and the best methods of teaching the several branches thereof.

(2) The best means of providing educational and other opportunities for the deaf-blind.

(3) The best method of instructing adults, especially the newly blinded, and the effect of charitable or semi-charitable assistance upon the blind in general and in particular.

(4) The best methods of embossing and printing and of increasing the number of the reading blind.

(5) The best forms of organization and administration for commissions, associations, etc.

(6) The best kind of legislation for minimizing the handicap of blindness without pauperizing the blind.

(7) The best kinds of books and appliances for the use of the partially blind and the best methods of obtaining them.

(8) To discover and open up new lines of employment to the blind and the partially blind.

(9) By organizing and maintaining a minimum laboratory with necessary staff for testing out new lines of employment as cannot be tested out to greater advantage on the premises of the concern offering the employment; and with facilities for instructing a prescribed number of adults in such vocations and in the necessary re-educational rudiments thereof as in the judgment of the trustees of the Foundation are not already adequately provided for in the course of instruction offered in any local organization.

Article IX. Bureau of Education.

(a) The Bureau of Education shall improve every facility for preparing the blind and the partially blind for the greatest possible participation in the activities and enjoyments of life, and particularly:

(1) By providing courses of preparatory instruction for present and prospective teachers and officers in the various departments of work for the blind and the partially blind.

(2) By co-operating with schools in the effort to make their curricula a more natural and logical preparation for the vocations open to the blind and the partially blind.

(3) By providing scholarships and readers to a limited number of especially capable students to attend commercial, technical, under-graduate and professional schools, as their respective cases may require, such scholarships and readers to be awarded in general through existing organizations and in accordance with the rules and regulations which may be set up by the trustees of the Foundation.

(4) By co-operating with schools, workshops, and other local organizations in the installment or development of such departments of vocational instruction as their particular environment or present equipment may appear to justify.

(5) By financing the work of the Commission on Uniform Type for the Blind and co-operating with embossing plants and libraries in their efforts to improve the quality and increase the quantity of embossed literature.

(6) By assisting in the production of "clear-type" books and otherwise co-operating with societies for prevention of blindness and conservation of vision.

Olin H. Burritt of the Overbrook school had posed the seminal question in a letter dated January 26, 1921: "If we favor a National Institute, how is the Board of Directors to be constituted so as to insure the confidence and support of all those who are to be served by such an Institute—Schools, State and Local Associations, Employment and Custodial Institutions for the Blind?" He went on to offer Latimer a piece of strategic advice. Since Edward E. Allen of Perkins had sponsored the AAIB resolution the preceding summer, "get him to outline an organization of Directors, including a suggestion as to their method of appointment that seems to him satisfactory."

To Latimer's disappointment, this ploy had not worked. Allen's response had been terse and somewhat indifferent. "My ideas as to a general agency for the blind are still very indefinite," he wrote Latimer on March 10. He made no reference to Latimer's question as to how the board should be composed, but contented himself with the general observation that the new organization should be "permissive rather than mandatory in influence. . . . Begin small, and by going slowly and surely progress to the end that our work for the blind shall be blessed without being standardized."

Latimer had gotten a lot more help out of Sherman C. Swift, AAWB's first vice-president, who had gone over the drafted material with meticulous care. After making a number of useful semantic suggestions, Swift, who was a poet and literary critic in addition to being chief librarian of the Canadian National Institute for the Blind, showed a fine grasp of practicalities. In the original version, the by-laws had called for quarterly meetings of an 11-member board, with eight members constituting a quorum. "It will be almost impossible to get eight people from all quarters of a great country like yours to travel over long distances four times a year," Swift wrote Latimer on March 4, 1921. He suggested that the quorum be five at most.

Swift also had some comments to make concerning the size of the quorum for the annual meeting of members, at which directors would be elected. This quorum had originally been set at 100, which Swift thought too large a number. He suggested cutting it in half.

As a matter of fact I think even a smaller number than 50 would be found to work just as well or better, but of course you have to keep in mind the element of necessity in order to justify existence. If people think that a half dozen or a small handful can do the business as well as a large number, they are liable to refrain from attendance and the whole organization would lapse from want of interest. On the other hand, if you have your quorum too small, the whole Foundation is liable to become the tool of a clique, but 50 people from all parts of the country are pretty hard to manage by one or two intriguers.

The crucial point, he concluded,

is to secure the appointment of the proper men and women to positions of responsibility at the initial meeting of the whole organization. It is at this meeting that the forces of progress and intelligence must see to it that the forces of



Olin H. Burritt



Sherman C. Swift

selfishness and retrogression are not allowed to secure control. Once fill your offices with selfish or unqualified men and women and, to use a homely expression, your goose is cooked. . . . You and I know of two or three men and possibly one or two women in the United States who have considerable prominence in departments of work for the blind and who have already exhibited a desire to control and manipulate the whole works.

Some of Swift's well-made points registered; others did not. In the version of the by-laws submitted to the delegates at Vinton, the number of trustees had been enlarged to 15, but the quorum remained at eight. Board meetings, however, had been changed from quarterly to semi-annual, and interim powers placed in the hands of a really small group: the five-member Executive Committee, of whom a majority constituted a quorum. As to meetings of the corporate members, the quorum was no longer put at 100 or even 50, but 25.

It had remained for Dr. James Bordley, Jr., a Baltimore ophthalmologist, to put his finger on the essential weakness of the proposed structure. Dr. Bordley had acted as the first director of the Red Cross Institute at Evergreen while simultaneously wearing the uniform of an Army lieutenant colonel in his capacity as the U.S. Surgeon General's representative at the hospital for blinded soldiers.

I am convinced [he wrote Latimer on March 7] that to succeed, a national institute must have a firm financial foundation, that that foundation must not be built up by small donations from strictly interested workers. . . . There is but one way to get the necessary money—a harmonious, generalized movement. On this point I have had experience. Believing that through certain influences we could reach a large sum of money, the Red Cross Institute undertook to gather it in for the work for the Nation's blind, only to have our efforts thwarted by certain workers for the blind. . . . You should have on your Board not only professional workers for the blind but men entirely outside of the work, men of large business experience, men who wield national influence, men who can find the money necessary to capitalize the work. . . .

The great trouble with work for the blind is its restriction to its own workers. I am convinced that any movement to succeed must be a broader movement. You must encourage outside assistance, outside criticism, and outside interest in your every undertaking.

His letter also included a cautionary note which coincided with Latimer's own conviction: "This attempt must be a success, as failure will for years to come react to the disadvantage of the blind."

As things turned out, it took very little time for the soundness of Dr. Bordley's suggestions to become evident to all. No sooner had the Foundation been incorporated, and before it even opened its offices, the by-laws were amended so as to enlarge the number of trustees from 15 to 25. The 10 special interest classes remained, but the remaining 15 trustees were to be "chosen from among persons of influence" by the Executive Committee. The board would meet regularly but once a year, with provision for special meetings to be called when necessary. Thus control of the Foundation's destinies was soon to pass out of the paro-



The Red Cross House, Evergreen

chial circle of workers for the blind and into the hands of the "men of large business experience, men who wield national influence, men who can find the money necessary to capitalize the work."

If a weary sigh escaped Henry Randolph Latimer as he finally climbed into bed that night of June 23, it was understandable. The strenuous year he had put in was, he knew, only the beginning. He was confident that the American Foundation for the Blind would be born at Vinton; what remained to be seen was whether it could survive after birth.

□ And born it was, exactly on schedule. On June 28, 1921, at the concluding business meeting of the ninth biennial convention of the American Association of Workers for the Blind, the delegates voted, without a dissenting voice, to adopt the enabling resolution:

**The Enabling Resolution Passed
Unanimously**

Whereas, It is the sense of the American Association of Workers for the Blind, in convention assembled, that every interest of the blind and of the partially blind of America could be greatly subserved through the instrumentality of a properly constituted organization to co-operate with all existing agencies in work for the blind and the partially blind, and to do such other things as are not, or cannot be, done by the existing agencies;

Whereas, Such an organization should be representative in character, and its board of trustees should represent the various phases of work for the blind, and should include persons of influence interested, but not actually engaged, in work for the blind;

Whereas, The Executive Committee of this Association have given much serious thought to the question of a proper Constitution for such an organization;

Whereas, A Committee on Foundation, appointed by the President of this Association for this specific purpose, have made public their findings, for the benefit and information of the members of this Association, concerning a draft of what they consider suitable Articles of Incorporation and By-Laws for such an organization, and which draft has been carefully revised by the regularly appointed Committee of the Association;

Be it Resolved:

1. That this Association does hereby authorize Messrs. H. R. Latimer, Waldo Newcomer, and Chas. F. F. Campbell to act as its Committee on Incorporation, and to incorporate in accordance with the Articles of Incorporation hereinafter set forth;

2. That said Committee on Incorporation, in accepting the duty thus imposed upon them, agree, having accomplished the act of incorporation, to proceed immediately to the adoption of the By-Laws, hereinafter set forth;

3. That said Committee on Incorporation, having accomplished the incorporation and enacted the By-Laws, agree to proceed immediately to elect the 15 trustees hereinafter named as the First Board of Trustees of the organization;

4. That, having done all these several things in accordance with the will of the Association and in perfect good faith, said Committee on Incorporation shall turn over to the First Board of Trustees of the organization all minutes, and papers in any way relating to the organization, and shall itself thereupon cease to exist.⁹

The delegates then proceeded to nominate and elect the Foundation's first board of trustees: J. Robert Atkinson, Los Angeles; Mrs. Emmons Blaine, Chicago; Arthur E. Bostwick, St. Louis; George W. Brown, Boston; Olin H. Burritt, Philadelphia; Randall J. Condon, Cincinnati; (Mrs. Homer) Mabel Knowles Gage, Worcester, Mass.; W. Howard Hamilton, Baltimore; James C. Jones, St. Louis; Charles W. Lindsay, Montreal; M. C. Migel, New York; William Fellowes Morgan, New York; Prudence Sherwin, Cleveland; Felix M. Warburg, New York; Herbert H. White, Hartford, Conn.

Among the other business transacted at the final session was the election of AAWB officers, at which Latimer won a second term as president. Joseph J. Murphy, who was elected treasurer, was to resign shortly thereafter for reasons of health. Named to fill his unexpired term was a fast-rising star, Robert B. Irwin.



Robert B. Irwin

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The Theragnostic Group in a Rehabilitation Center for Visually Handicapped Persons

While group psychotherapy is now in rather wide use in many areas and guises, it has traditionally been used as a long-term therapeutic process, usually with "mentally disturbed" patients. Its applicability for other than a "psychiatric" population in a "psychiatric" setting, however, has become much more evident of late, there being an ever widening variety of methods, goals, and techniques subsumed under the generic heading of "group process" or "psychotherapy." These methods of group interaction have been used with executives, teachers, psychologists, etc., through "sensitivity" training in "T" groups (as found in human relations labs)^{1,5} and psychodrama to help work out "normal" problems;⁹ in family groups;² and in action and play with adults,⁸ the physically handicapped,⁴ and geriatric populations in rehabilitation settings.⁷ In many of these situations, the emphasis appears to be less on long-range, "depth" therapy or personality reorganization than on helping the participants work through some present stress situation. Also, the prime emphasis seems to be on working with the "normal" or basically healthy, integrated individual who is undergoing some form of existential crisis.

□ In any such group, one of the major goals, of course, is that the interaction of the group and the therapist will be therapeutic, that it will effect a change in perception, a decrease in disabling anxiety with a concomitant increase in the participant's potentials and capacities for effective coping and interaction with the world, and an increase in reality testing. In any form of group interaction (regardless of the method used or the goals), there is a certain amount of projection—the group members "telling" of their strengths, weaknesses, and values. It would seem, therefore, that there are really two facets of any group psychotherapy setting—the therapeutic and the diagnostic or informational. What would seem to be a rather logical combination of these factors is to be found in the "theragnostic admission group" which was designed specifically to perform these two functions. Pratt and DeLauge describe it as follows:

The "gnostic," that is the knowing or understanding function of these admission groups is an integral part of the therapeutic process, and of the wider treatment program. This structure provides for the occurrence of interpersonal trans-

This article is based on a paper originally presented at the 12th Golden Gate Group Psychotherapy Conference held in San Francisco, June 1969. The author wishes to acknowledge the contributions of Illinois Visually Handicapped Institute staff who collaborated in initiating the program described in this paper: Mrs. Robert Adams (formerly staff psychologist), Miss Dorothy Dykema (formerly rehabilitation counselor), Miss Alice Drell (director of education), Larry Ginensky (clinical director), and Fred Bixby (rehabilitation counselor).

AL MANASTER

Mr. Manaster is staff psychologist in the Chicago Area Office of the Illinois State Employment Service and visiting professor in the behavioral sciences, College of DuPage, Glen Ellyn, Illinois.

The Concept of the Theragnostic Group

Double function

actions that operationally result in several types of increased understanding to be optimally exploited.

These troubled people discuss their life situation, their problems, and each other in currently oriented ongoing process. . . .

Staff participants use this increased understanding in furthering the group process itself, but also use this knowledge of the patient as a person in relation to his involvement in other types of group therapy. . . .

We purposely stress the "gnostic" understanding, knowing about the person—his assets, problems, and style of life—as opposed to "diagnostic," *per se*. We want to exchange esoteric techniques, that serve only to reduce troubled people to *nothing but* their symptoms (label "disease entities") for transactional evaluative procedures that will present the person within a living context. . . .⁶

□ A few years ago, over an 11-month period, "theragnostic" groups were conducted at the Illinois Visually Handicapped Institute in Chicago, a state rehabilitation center for the legally blind. It was felt that as people came into the Institute for a one-week rehabilitation evaluation, they would find themselves in the rather stressful position of being tested, examined, investigated, looked at, diagnosed, and discussed by many staff members. They were not regular students or clients, were not in a regular program, did not belong, did not have any friends, and, in general, had been stripped of privacy and responsibility. Being in this sort of a situation, even for a short time, without having a chance to express their feelings (anger, anxiety, frustration, fear) and reactions to what was happening to them would intensify the reactions to visual disability that they were already probably experiencing. The clinical staff, therefore, felt that through the use of a time-limited, problem-oriented "theragnostic" group, many previously noted negative reactions of evaluatees might be prevented or lessened by offering them a chance to handle their problems and reactions in what could be a relatively positive experience. It was hoped that evaluatees who participated in such a group might also evidence a more positive response to the institution and to the training program that was to follow and be able to " . . . experience from the first that the expected, rewarded . . . role is *not* passive-receptive, but active, self-reliant, helping oneself and each other."⁶

The program was initiated in September 1966, and continued through July 1967, at which time the whole evaluation procedure at the Institute was revised. Every second week during this period, the staff of the Institute would evaluate six individuals to determine their needs and skills in functioning as visually handicapped persons in the community. As a part of this week-long evaluation program, group sessions of approximately one hour each were scheduled for Tuesday, Wednesday, and Thursday. The two co-leaders for each group were drawn not only from the clinical services staff but also included members of the teaching staff who had been trained in group therapy techniques.³ Several of the co-leaders were themselves visually handicapped which, at times, was helpful to the clients when discussing their feelings of helplessness and their reactions to blindness.

Theragnostic Groups at IVHI

Organizing the groups

The evaluatees were informed on the first day of evaluation (Monday) that there would be group meetings in which they could air some of their feelings and reactions to the Institute and to their disability. Although attendance at the groups was not mandatory, the evaluatees were strongly encouraged to attend. Most evaluatees seemed to look forward to the sessions and to freely discussing what had happened to them during the day. Once admitted as students, many of these individuals would, in the regular, ongoing group counseling program, comment on things that happened during the theragnostic group sessions.

□ Using a relatively non-directive or group-centered approach, the co-leaders encouraged the expression and discussion of feelings. Although the sessions were just three in number, a definite process of development could be observed. In the first session, the evaluatees would usually deal with their feelings about being at the Institute. The discussion would be rather superficial in nature with a lot of joking and kidding around and only a little discussion of actual problems and deeper feelings. They would mention some of the things that were happening in the evaluation and would touch upon the subject of stereotypes of blindness. It appeared that they were testing the situation. In the second session, their real problems and feelings would begin to emerge: their fears, anxieties, feelings of helplessness or anger, and their reactions to the institution and to the evaluation process. During this session, a great deal of corrective interaction often occurred, with staff or another evaluatee correcting misperceptions and offering new ideas and ways of looking at the situation. In the third and final session, resolutions were sought for many of the problems that had been brought up, usually involving the realization that this is the way life is, that there are positive things that can be done, and that the Institute was one way in which they could work towards the future. They also learned that they were really not alone, but that there were others who shared their problems and who were concerned with them.

□ Throughout the sessions, the emphasis was on the "here and now" situation and the strengths of the client, his ability to handle situations, his having made the choice to enter the Institute for rehabilitation services, and the example of others who had achieved some success in their lives. At the same time, there was a realistic appraisal of the desire for a miracle and the hopes that somehow or other the person would be able to see again. With this marked increase in openness and honesty, anxiety concerning the training program was lessened, with a subsequent carryover to the regular rehabilitation program. The evaluatees had an opportunity to see the staff as people who were interested in them as human beings, not merely as objects to be evaluated, diagnosed, and looked at as if they were under a microscope. The interactions between the evaluatees and the staff in the sessions allowed for immediate awareness and the sharing and handling of problems that might otherwise have become quite disruptive to the individual's progress, not only during evaluation, but perhaps later in the program.

In general, this kind of extremely short term, highly intense, group pro-

Attendance

Conducting Group Sessions

Corrective interaction

Benefits for the Clients

Therapeutic and diagnostic benefits

cess was useful for both therapeutic and diagnostic purposes. It enabled the clinical staff to observe the evaluatees functioning in a situation less structured than the usual diagnostic and testing type of program. The sessions were tape recorded with the permission of the group members and after each session the co-therapists were able to discuss their interpretations and impressions. At the regular staff conferences, held at the end of the evaluation week, clinical services staff would give their impressions, obtained from observations during the theragnostic group sessions as well as the information received from more formal test procedures, to help the total staff in interpreting the client's needs and potentials and planning an individual program for him.

□ The theragnostic group process appears to afford marked therapeutic benefits to evaluatees who are able to develop more positive feelings about themselves and others in relation to their disability, to the rehabilitation center, and to the future. The interactions offer many insights into personality dynamics and the potentials of the visually handicapped evaluatee for successful participation in a total rehabilitation program. Most importantly, the evaluatee is able to find himself as a human being who has a right to be himself and to be heard and who is not an object to be evaluated, diagnosed, put into a pigeonhole, and forgotten.

Conclusions

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Listening Education: From the Kansas Project

Normally, one does not need formal education to learn to hear. On the other hand, one's ability to listen efficiently and to interpret what is heard can be improved with training. Such training, however, has been largely neglected despite the fact that two-thirds of a person's life is spent in listening and despite the fact that the poor interpretation of what is heard is involved in more mistakes, more accidents, and the slowing down of production in more industries than any other single factor.

□ It has long been recognized in the rehabilitation of the blind that hearing is the blind person's most important remaining sensory modality. An individual can be taught the correct use of the long cane and still be a very poor independent traveler if the level of his listening efficiency is low. A blind person may have an excellent sense of touch and a good kinesthetic memory, but if he cannot properly interpret words and sounds, he cannot effectively receive instruction or follow directions in learning new skills. Listening efficiency, therefore, plays a vitally important role in nearly every area of the rehabilitation of blind persons. Nevertheless, listening education for blind persons has been neglected.

Based on discussions, training conferences, and research that was begun as early as 1963, it was realized that serious and formal work was needed to develop and test teaching materials for listening education. This paper is an effort to describe the program of study resulting from a three-year project on listening education conducted at the Kansas Rehabilitation Center for the Blind in Topeka.

The basic listening education program consists of three 50-minute class periods per week for 17 weeks. Instruction is divided into three phases: pre-skills or listening readiness, development of listening skills, and development of recall and retention through the techniques of review. The program is flexible enough so that the number and length of classes can be increased or decreased to conform to the scheduling of other activities in the rehabilitation center.

□ The specific goals of the first phase of instruction include the discrimination of like and different sounds; unlearning rote listening by eliminating the retention of irrelevant words and sounds; and greater use of the

The teaching materials described in this paper were developed as a part of Innovation Project and Grant No. 83-R025.6 from the Rehabilitation Services Administration, U.S. Department of Health, Education, and Welfare, with matching funds provided by Services for the Blind and Visually Handicapped, State of Kansas. The project, entitled "Methods for Improvement of Listening Efficiency in Individuals with Visual Impairment," extended from July 1, 1967, to June 30, 1970, and was carried out within the Kansas Rehabilitation Center for the Blind, Topeka.

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Listening and Rehabilitation

Origins of project

Basic program

Phase One: Listening Readiness

other senses in listening and retention. Lessons include the use of sounds, music, work and task drills, informal paragraphs, and stories. Much time is spent in introducing the individual to the use of mental imagery and organization to increase his ability to remember what he hears. Also in this phase, a great deal of attention is given to the problem of "emotional filters," the selective deafness resulting from the over-stimulation of the brain by the emotions. Although these filters affect nearly everything we hear and make efficient listening extremely difficult, it is possible for an individual to become aware of the influence of the emotions and to learn to cope with them satisfactorily.¹

The decision to include a listening readiness phase in the program was made after an initial attempt aimed at an immediate improvement in listening efficiency had failed. It was discovered that the students thought that these efficiency-improving exercises were childish and of no use, because most of them did not really believe that they needed a listening class. An emotional filter was, in effect, preventing these students from really hearing and understanding what was said in the rather didactic introduction given to the class. It is necessary, therefore, to bring the class to the realization that their listening is inefficient and that in many ordinary listening situations there is much that they do not hear. This is done, for example, by "firing" a rapid sequence of numbers at the student ("seven-four-eight-two-four-three-one") and asking him to identify immediately the sound that is repeated. To do this successfully, the student must listen only to the pure sound of each member of the sequence rather than to the overall sound of a "number," as is his inclination. He is not given time to repeat the sequence to himself and the sequence is not repeated for him. Here, as in other exercises, the goal is learning to pick out the likeness in sound from the feelings, from the impression that each sound makes, rather than through the intellect alone. Exercises using words allow for identification of a word-sound that is different in a sequence ("tomorrow, today, *tight*, tonight, together, toward"). Exercises on tape using pure sounds (bells and buzzers, for example) allow for both kinds of discrimination. In all of these exercises, the student must respond immediately. The sequence is not repeated and a new sequence is presented as soon as he responds (whether correctly or incorrectly). Finally, rapid sequences requiring the use of mental imagery are introduced. In these exercises, four words have something in common as a class of ideas, the fifth is from some other class ("hat, coat, boots, *apple*, gloves").

□ The reaction of students to these exercises is typically one of frustration. They complain that the sequences are repeated too rapidly, that they do not have time to think; they then rationalize their mistakes. Soon, however, it is realized that there are deficits in their ability to listen efficiently: short attention span, inability to respond through the feelings, disorganized approach to what is heard. Most importantly, it is recognized that efficient listening is important and that it is the responsibility of the individual to improve his listening skills. Once this level of understanding is reached, it is possible to introduce more advanced kinds of exercises.

Need for readiness phase

Exercises to demonstrate listening inefficiency

Responsibility for Learning to Listen

To promote the ability of the student to sort out and reorganize what he hears, groups of words that can be arranged to form a logical sequence are presented to the student. For example, the sequence "plant, soil, vegetable, seed" can be rearranged to form the sequence "soil, seed, plant, vegetable." Taped sounds (the opening of a car door, someone getting into the car, fastening the seat belt, inserting the ignition key, the engine starting) can be presented out of sequence and the student asked to reorganize them into a logical order.

□ Exercises to enhance the ability of the student to use mental imagery as part of the listening experience are introduced at about this point in the first phase of the program. In these, the intellectual tasks of listening are de-emphasized and the stress is placed upon the use of all types of sense impressions and feelings. Parts of a recording of the *Grand Canyon Suite*, for example, are presented and the group is asked simply to relax and to allow the music to stimulate their feelings and imagination. After listening to the music, each person is asked to relate his experiencing of it. Through their impressions of cold, warmth, the smell of new rain, and so on, and through the fear, pleasure, discomfort, or other reaction to these impressions, it is possible to demonstrate that ideas such as peace, danger, and salvation can be "heard." Along with the musical exercises, very short, exaggerated stories are presented and the students asked to retell them in their own words. Here again, the student is asked to relax and to "feel" the words as they come through, rather than trying to remember the story by rote. An example of such a story is: "In January, Jim started for Jamaica in an outrigger canoe with a crimson sail, and a life boat tied behind, which was full of beer cans and pretzels."

Through the use of these exercises aimed at developing the use of mental imagery, it has been learned that both adventitiously and congenitally blind persons develop this skill quite easily. Those who had known sight are naturally able to use visual imagery to a greater or less extent. Those without access to visual imagery, however, also have vivid mental imagery that is elicited by words and phrases. Although this ability is certainly helpful in a listening education program, it has been found that the generally low level of efficiency in listening makes it necessary in the first phase to make the content of the exercises extremely vivid and greatly exaggerated. Through discussion held near the close of each hour-long session, it is possible to underscore the significance of the exercises within the context of the problems of day-to-day communication. The individual soon discovers that listening is not just hearing but a total involvement of the self and that really effective listening, recall, and retention do not depend on being able to remember everything that is heard, but on tuning in to the essential content of the communication. (Some of these ideas are also basic to the teaching of rapid reading.) It must be emphasized at this point that these concepts and principles seem to emerge only through the experiences of the group with the exercises presented in the first phase of the program. Direct transmission of these ideas and insights to the individual through lectures does not work. The listening readiness phase, which

Music and Stories

Visual and mental imagery

Involvement of self

generally lasts about six weeks, is, therefore, an important and necessary step in listening education.

□ In the second phase of the program, the following specific listening skills are developed: learning to "tune in" to instructions, general speech, and sounds as the first step in the listening process; recognizing transitions and "tuning in" again through clue words, phrases, and sounds; recognizing the concluding phases of the listening process; improving listening organization through the further development of mental imagery and pictures; learning to reorient oneself to the mental picture through verbal, non-verbal, and other sensory clues; and recognizing personal emotional filters and learning to control their effects better. Having achieved a certain awareness of his disorganized listening in the first phase of the program, the student is more motivated in his learning and has some insight into the importance of tuning in and being attentive for the review and retention of what is heard.

While the approach in the first phase was to single out specific attributes of good and poor listening, each exercise in the second phase is designed to utilize the whole complex of skills necessary to efficient listening. An essential part of this strategy is that each individual must be tuned in to the whole group. The dynamics of the class, with the intricate interplay of many listening attitudes and responses to what is heard, greatly influence the presentation of material by a speaker. It is for these reasons that a group approach is to be preferred to individual instruction in listening.

Merely listening and "parroting" what is heard by rote is not learning. It has been discovered, however, that verbalizing what is heard does play an important part in developing a permanent listening pattern. More important still is developing an ability to analyze what is said and to determine whether or not it makes sense. An organized listener relates each item in a communication to each of the other items and is able to re-order what is heard so that even a garbled communication can be understood accurately. Since listening education students are usually also learning orientation and mobility skills at the rehabilitation center and are, by this point in the program, well acquainted with the layout of the facilities of the center, a useful exercise in listening is for each person to choose an unidentified spot in the building or the surrounding grounds and to give the other students directions for reaching it. The group is to identify the destination from the directions. It is surprising to see in how many different places people would have been had they actually followed their interpretations of the directions given. Naturally, part of the confusion is a result of poor and inadequate instructions, but most students will readily recognize that the individual receiving the instructions must assume a certain amount of responsibility for figuring out the actual intentions behind the instructions. Through various exercises in the use of mental imagery, the ability to "tune out" the unnecessary and misleading parts of a communication can be developed.

□ In addition to listening to verbal instructions, exercises aimed at the efficient use of sounds are introduced. A tour of the entire center setting is

Phase Two: Developing Listening Skills

Strategy

Verbalizing, analyzing, and "tuning out"

Listening and Orientation

presented through a tape recording of the sound environment at various points from the front door through the halls and classrooms and so on. After the sounds are played in sequence, the sound of a particular spot is repeated and each student is asked to identify the location. Other sound tours can be made at airports, bus stations, a dentist's office, and so on. Learning to identify particular sounds in a setting is particularly useful to a blind person who, if he becomes confused, must be able to reorient himself through sound clues alone.

Through exercises involving highly emotional material, the students learn to listen for clues to the personality of the speaker and to recognize how their own emotional filters affect the way they hear things. Throughout these first two phases, each student is encouraged to analyze his own listening skills and to develop, with the help of the instructor, some insight regarding his strongest and weakest habits.

□ The third phase of the listening education program is devoted to the further development of the student's ability to recall and retain information that he has received orally. The skills learned in the first two phases of the program are refined and tested through the presentation of more detailed sets of directions, news stories (both read from newspapers and taped from radio and television), informal paragraphs, speeches, music, personal conversation, short stories, and sequences of taped sounds that form a pattern, tell a story, or provide orientation to a particular sound environment. Immediate recall is tested after presentation of the material and retention of information is tested several times over a period of up to two weeks. In all of these longer and more detailed sequences of listening, the individual constantly reviews what he has just heard, combining the general ideas to form an overall pattern from which specific facts can then be recalled. It is interesting to note that a student attending academic classes will take better lecture notes if he has learned to become an organized listener. A group of college preparatory students who attended a summer session of the listening education program were found later to have less difficulty in taking good notes than they had before the program.

□ The teaching manual developed for conducting a listening education program reflects the fact that the progress of individual groups will vary widely. The exercises to be presented in each phase of the program, therefore, are of different lengths and no effort has been made to set up an hour-by-hour schedule for presenting material. An awareness of the character of the group and constant evaluation of their progress should guide the teacher in planning the program.²

Formal evaluation of gains in listening efficiency is available through the administration of the Brown-Carlson Listening Comprehension Test before and after the program. Since this is a listening test, it is easily taken by visually handicapped persons. One of the five subtests does utilize a chart which partially sighted individuals are usually able to read, but which can be adapted very simply for those who cannot. If the person reads braille, the chart can be transcribed; if not, raised letters and numbers made of cardboard can be used by allowing the subject 10 or 15 minutes to

Phase Three: Recall and Retention

Teaching Manual

Brown-Carlson Listening Comprehension Test

study the chart. If each member of the group has an adequate means of writing his answers to the test, it may be administered to the group as a whole. For those who do not type, write in longhand, or use braille, a one-to-one testing situation, with a sighted person recording the answers, is necessary. The Brown-Carlson test was administered to each group participating in the three-year innovation project at the Kansas Rehabilitation Center. Although the materials used in the program were being constantly changed and reorganized during this period, the groups showed an average gain in test scores of 19 percent.

□ It is interesting to note that in past projects related to improving the listening skills of sighted individuals, those who score the lowest on performance tests are also the poorest listeners. Could it be, then, that organized listening is related to the ability to orient oneself better to the physical environment? Perhaps organized listening influences a more efficient use of the kinesthetic sense. Could such test results also indicate that becoming a better listener helps one to cope with his physical surroundings? A study to compare scores from performance tests with those from listening tests involving an experimental and control group could, therefore, be of value in work for the blind. Within the rehabilitation center itself, it has been noted that the known underachiever will, on taking the Brown-Carlson test before entering the listening program, score somewhat lower than his IQ potential. In each of these instances, the evaluation by the general center staff of the individual's total rehabilitation progress seems to agree with the individual's test scores. During this project, these staff acted as consultants to the listening program classes and they observed in addition that this particular new program had a positive influence on the attitudes of their clients in other areas of the rehabilitation training program. It would seem, therefore, that the Brown-Carlson Listening Comprehension Test might be another valuable tool for determining an individual's total rehabilitation progress. Looking at the entire picture of test samples, it is clear that, regardless of visual acuity, those who score lowest on the test at entry into the program make the greatest gains on the test after training. Those who score in the highest range initially do not show significant gains in the final test.

In the course of the three years of the project, it soon emerged from work with groups and with individuals that, without a doubt, the greatest inhibitor of improved listening efficiency is the emotional filter. Regardless of the test scores and the intensive training in the various listening skills, both positive and negative emotional filters continued to adversely influence listening efficiency. Many emotional filters act so automatically and completely that they can never be controlled, but others, if recognized and identified, can be watched for and eventually coped with. Those who were able to retain such insights and thereby become better listeners, did so by realizing that one listens with the total self and not just the ear and the brain. This basic truth concerning involvement of self must be recognized and dealt with on an individual basis while teaching listening as well as any other training offered to the human being.

(Continued on page 275.)

Relationship of Other Skills to Listening

The emotional filter

Time, Money, and Students With Visual Limitations

Time is money, and time costs money. Many students with visual limitations find that their methods of study take up too much time and that their haphazard attempts to improve their efficiency are often ineffective. Experience, however, has shown that an investment in certain high quality devices and their methodical use can result in better learning and the saving of *hours* of study time every day. When a sighted college student chooses to spend \$500 on a skiing outfit or even \$1500 on a car, few people feel that he is being extravagant. A visually limited college student, who will probably never buy a car or a skiing outfit, should, therefore, not hesitate to arrange for the use of equipment worth from \$500 to \$1500. Such an investment will not only greatly increase his learning efficiency, but it will afford him more time for a social life and for the other recreational activities that are so essential for balanced, healthy development.

□ The equipment and methods which are discussed in the following pages have proved to be quite effective for a typical visually handicapped student who is a slow braille reader and a rather inaccurate typist. More highly skilled students may find that some of these suggestions will not apply to them.

Virtually any student whose handicap interferes with his ability to read can receive a talking book machine on free loan from the Regional Library serving his geographical area. A variable speed adapter for a talking book machine, also available on free loan, enables the reader to increase the playback speed of a talking book record. Thus, a record which would normally take one hour to read can be read in as little as half an hour. The increased speed is more demanding of one's attention, but the result is that comprehension is generally better.

A taped book of 400 pages may require 12 to 15 hours of reading time when played at normal speed. Through the use of the Sony Model TC 105A tape recorder with variable speed adaptation, it is possible to reduce the reading time by as much as 50 percent and yet, in most cases, actually increase comprehension. Also included on this model is a button which allows the user to "mark" a tape that he is recording with a low frequency beep which is audible only at fast forward and reverse speeds. The TC 105A (\$189) is available from the American Printing House for the Blind (1839 Frankfort Avenue, Louisville, Kentucky 40602). A student who is serious about learning efficiency should have two of these at his disposal.

□ The Sony Model TC 40 cassette tape recorder is slightly smaller and heavier than a 400-page textbook. It can be operated on batteries and has a built-in microphone—allowing one to record or play at the flip of a switch, with no set-up whatsoever. When recording, an alarm device sounds as the end of the tape is reached. It has a fast forward speed (cue)

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Equipment and Methods

Talking book machine

Sony tape recorder

Sony Cassette Machine

with the playback head engaged, which greatly eases the job of finding certain places within a tape. There are two reverse speeds. Any six-volt AC adapter (not more than \$5) can be used to save battery power when an outlet is nearby. The machine fits easily into a briefcase or purse and is just as convenient to carry around all day as an inkprint book. It weighs only 1.7 pounds with batteries. Without such a device, most visually handicapped students must do all of their reading in their rooms, haul around heavy machines or bulky braille volumes, or read at the convenience of a sighted reader. With a TC 40 one can read at any time and in any place that a sighted reader would read an inkprint book. A lot can be done with just one TC 40, but two are much more than twice as efficient. The TC 40 costs about \$98.

At present only Sony cassette tapes have the necessary foil to activate the end alarm in the TC 40. Cassettes that play for one hour on each side (C 120) are by far the most efficient. Any good quality, lubricated tape can be used on the TC 105A. Seven-inch reels are not recommended, however, because they cannot be left on the machine when the dust cover is closed. Since the cassettes are used repeatedly, five or six should be enough. On the other hand, material to be stored for the entire semester is kept on reels, and therefore it is best to have a separate three- or five-inch reel for each major aspect of each course, i.e., one for notes on sociology class sessions, one for notes on reading assignments in the sociology textbook, one for notes on the outside reading assigned for sociology, and one for notes for the sociology term paper. While recording or re-recording onto reels, the low frequency beep is used to indicate sections of the material for future reference. A simple code of beeps differentiating Monday's notes from Wednesday's notes, for instance, may also prove helpful.

□ Whenever the professor will allow it, his entire lecture should be recorded with the TC 40. Most instructors, who might object to systems requiring the stringing of plug and microphone wires around the room, will not mind this inconspicuous little device. Even though the complete class session is on tape, braille notes of the questions and observations which come to mind during the hour should not be neglected. Every student, whether visually handicapped or not, should spend some time reviewing the notes on a class session before going to the next meeting of that class. The individual must decide whether there was enough content in the lecture to warrant replaying the whole tape during the review. If not, the tape may be used to record something else and nothing will have been lost.

If, however, the recorded material is important to supplement one's memory and braille notes, it should then be recorded onto a reel by means of a patchcord strung between the TC 40 and a TC 105A. (If the reel will take an hour or more of recording time, then this process will involve no more time than it takes to turn on the two machines and turn them off an hour later.) With the taped class session on one of the TC 105A's and a blank tape on the other, the tape can be played at the fastest comprehensible speed and a "digest" of the important points recorded onto the blank tape, using the "instant stop" switch between comments. This should

Tape—open reel and cassette

Recording Lectures

Making "digest" tapes

not take much more than half an hour, after which additional thoughts from the braille notes may be recorded. Thus, an hour's class will be condensed to not more than five minutes on a tape reserved for notes for that particular class. The complete class session tapes or the braille notes are not saved as re-reading them is much too inefficient. Throughout the semester, a supply of basic information is built up on one tape and is easily reviewed at examination time.

□ Students are often asked to read only one chapter of a book which is held on reserve in the library or an article of five or 10 pages in a journal. If the material is available for more than two weeks before it is due, it can be sent to Educational Tape Recording for the Blind (9911 South Wood Street, Chicago, Illinois 60643). For \$10 a year they will record any material sent to them. Short pieces can usually be done within two weeks. If the ETRB service cannot be used, arrangements should be made for a local volunteer or paid reader to record it. In any case, a quality recording is important. Tappings without bibliographical information, table of contents, page numbers, and clear enunciation waste the time and effort of both the student and the reader. Reading with a "live" reader is recommended only as a last resort. The physical act of meeting together is time-consuming, and one of those involved is bound to be tired or inattentive.

Notes from the reading should be made just as with the re-recording of class sessions: playing the tape at the fastest comprehensible speed on one 105A and recording a condensation of the important points onto a tape on the second machine. If there are more than five minutes of notes on an hour's reading, it is probably not a very good job of "digesting" the material into notes. A low frequency beep should be placed between the notes on different items. Complete recordings should not be saved, only the digest notes for use at examination time.

□ If advance notice about a required textbook is received more than a month before the beginning of the semester, two copies of the book can be sent to Recording for the Blind (215 East 58th Street, New York, New York 10022) or one copy to ETRB. Although they are much slower, RFB produces much more efficient tapes. The material comes on five-inch reels with about one hour of recording per track, which makes for convenient re-recording onto C 120 cassettes. ETRB tapes are on seven-inch reels which means that a half-read tape cannot be left on the 105A with the dust cover closed; and, more importantly, there is a bothersome time overlap between one side of these tapes and one side of a cassette, making re-recording somewhat less convenient.

If there is no advance notice of a textbook, a *quality* recording should be done by a local volunteer or paid reader. Notes on reading assignments in the text should be made in the same manner as suggested for short reading assignments. However, it is probably wise for the student to keep the recording of the entire textbook on hand until the end of the semester. Then, unless some section of the text must be re-read, only about half an hour's worth of notes on the text need to be reviewed at examination time.

Assigned literary readings seldom require the exacting attention that a

Short Reading Assignments

Making notes on reading assignments

Textbooks

Novels

textbook does and much of the reading can therefore be done with the aid of a TC 40 at times and in places where it would not be convenient to take notes while reading. A taped copy of a novel can be procured by one of the methods already mentioned. It should then be re-recorded onto cassettes. If a student can get into the habit of carrying a TC 40 with him during the day, there will be many opportunities to read for 10 or 15 minutes at a time; and before long, a novel of considerable length will have been read completely. A few minutes in the evening spent recording observations on the day's reading may prove valuable. As with other types of material, a separate tape should be kept for notes on literary readings assigned for any one course.

Many visually handicapped students are slow braille readers. This means that using braille will not only waste time but also reduce comprehension. If a needed book is only available in braille, "digest" notes should be taped as the book is read.

For recreational reading, talking book magazines, for example, can be speeded up with the variable speed adapter on the talking book machine and re-recorded onto cassettes by means of a patchcord just as is done with novels. For instance, one side of a talking book recording of *Newsweek*, when speeded up, will fit on one cassette. Still the material cannot be skimmed, although the TC 40 can be carried during the day and each section of the magazine given only as much attention as it deserves.

□ Much of the strictly mechanical part of preparing a term paper (bibliography, looking for books, proofreading) should be turned over to a paid reader who can carry out assigned tasks without the constant presence of the student. When pertinent materials are found, they should be taped. A live reader is more efficient than tape only when what is needed is a few paragraphs or pages which must be sought out of a long work; or when it is getting late in the semester and no source of fast quality taping can be located. "Digest" notes on these readings should be made. An outline of the term paper can then be sketched in braille after listening to these notes. This outline is referred to while the final form of the paper is dictated to a paid or volunteer reader who can type it up later.

The student should take care to use a method of taking tests which does not interfere with his ability to express clearly and completely in the time allotted for the test what he has learned during the semester. Since most students seem to be slow and inaccurate typists, it is probably best to dictate the answers to a paid or volunteer reader, if the professor will allow it.

□ Although all that has been said above may seem rather complicated and expensive, an application of these ideas should substantially simplify the task of learning effectively from college assignments. In applying these suggestions to a student's particular situation and to the evaluation of his need for new equipment, the following basic points made in this presentation should be considered: 1) Everything is read at the fastest comprehensible speed; 2) A small, portable machine is useful for recording lectures and for reading during available bits of time throughout the day; 3) Ideas

Braille books

Recreational reading

Term Papers

Tests

Summary

from what is read are condensed and recorded onto separate reels for each major aspect of each subject (low frequency beeps are used to identify sections or dates on tapes); 4) Notes, rather than the original works, are used for review; 5) Face-to-face reading is kept to a minimum; 6) Braille reading is also kept to a minimum; and 7) Paid or volunteer readers are used to do as much "mechanical" work as possible.

Listening Education: From the Kansas Project—Continued from page 270.

1. The concept of the "emotional filter" is fully explained and discussed in the book *Are You Listening?* by Ralph Nichols and Leonard A. Stevens (New York: McGraw-Hill, 1957).
 2. The final and complete report of Innovation Project No. 83-R025.6, entitled "Methods for Improvement of Listening Efficiency in Individuals With Visual Impairment," is available on request from the Kansas Rehabilitation Center for the Blind, 2516 West Sixth Street, Topeka, Kansas 66606. The teaching exercises with directions, as well as instructions concerning the tapes, have been organized in a volume entitled "A Teaching Guide for the Instruction of Listening Education." This is being submitted for publication and will eventually be available for distribution to those centers and schools interested in listening programs.
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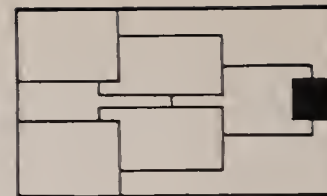
Notes

I.C.E.B.Y. Conference in Madrid

The Fifth Quinquennial Conference of the International Council of Educators of Blind Youth, which is to meet from July 26 to August 2, 1972, in Madrid, Spain, has announced a number of particulars regarding the conference. "New Subjects, New Methods, and New Pupils in the Education of the Visually Handicapped" has been chosen as the motto, along with the following discussion topics: research center reports, the "new math," programmed learning, "open education" programs, education for life in the community, occupational training and placement, and "border-liners" between the blind and the partially sighted.

The conference sessions will be held in the new, ultra-modern, air-conditioned Palacios de Congresos. The names of delegates from member states of the I.C.E.B.Y. should be reported to the Madrid office by December 1971. Non-delegates should apply no later than March 1972. The conference will be limited to 500 participants.

Further information about the conference is available from the chairman of the I.C.E.B.Y., Tore Gissler (Tomtebodaskolan, Fack, 17120, Solna 1, Sweden), or from the organizing committee, Organización Nacional de Ciegos (Calle de José Ortega y Gasset, 18, Madrid 6, Spain), chaired by Ignacio Satrustegui.



Where Do We Go From Here?

Fifty years and three months ago in the then small town of Vinton, Iowa, our forefathers sat down with a crystal ball. The entire several days of the 1921 convention of the American Association of Workers for the Blind was devoted to an intensive study of that crystal ball, and the result was the creation of the American Foundation for the Blind.

If we are unconsciously paraphrasing Lincoln's "Gettysburg Address," we should continue to use the analogy. He said, in part, that men would little note nor long remember what was said, but that the brave men who struggled there (meaning Gettysburg) will never be forgotten. The men and women who gathered in Vinton in 1921 may also be described, in a way, as brave, in that what they did there has had a lasting and continuing impact and it certainly will not be forgotten.

"Five Days at Vinton"

It is true, however, that generations come and go—and the field of work for the blind is no exception. There are those in this field, therefore, who may never have heard the story of Vinton or who may wonder about the beginning and original *raison d'être* of today's American Foundation for the Blind. With that in mind, we are devoting a number of pages in this issue of the *New Outlook for the Blind* to a detailed chronicle of that AAWB convention. We believe our readers will find it of great interest.

The editor's note introducing that story indicates that what we are printing is actually a draft of two chapters from a book that is to be published in 1972. Last year,

the Foundation commissioned Mrs. Frances Koestler to research and write a history of work for the blind during the last half century. The immediate stimulus for this was the 50th birthday of the Foundation this year. In its purpose and scope, the Foundation in 1971 is precisely what the AAWB convention outlined, although no one can say whether the crystal ball of 1921 revealed exactly what the infant agency born then would be like in its maturity.

The Koestler book, we assure you, will not be simply an exercise in agency vanity. Rather, it will delineate facts, trends, issues, solutions of old problems and attacks on new ones, and the major developments in the field regardless of whether the Foundation itself was clearly influential or even involved.

Fiftieth Anniversary Observance

The commissioning of the book is just one of several special activities planned by the Foundation in connection with its fiftieth anniversary observance. During the week of October 24, in New York City, there will be a major review (constituted on an international scale) of scientific progress with regard to the problems of blind persons and a major review (constituted on a national basis) of the current status of attitudes toward the blind. These conferences are invitational rather than open to the general public, but those persons who may not have received an invitation and who feel they have a vital contribution to make, should let the Foundation leadership know of their interest.

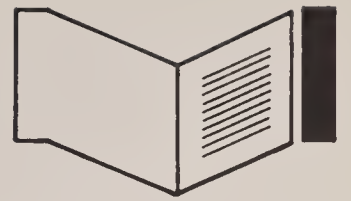
A further event, one which is open to

the extent of the available space, will be the Fiftieth Anniversary Banquet at the Plaza Hotel on the evening of Wednesday, October 27. While we believe that it will be what is so often called a "gala" occasion and a lot of fun, it will also feature the presentation of the Migel Medal to Dr. Jerome B. Wiesner, president of the Massachusetts Institute of Technology, and the Helen Keller International Award to Lord Fraser of Lonsdale, chairman of St. Dunstan's, England.

The Future

As one who has been, to put it mildly, somewhat close to the Foundation's management since 1949, I cannot help but be concerned about whether we are on the right track for the future. If I may be forgiven a personal note, I still remember my sense of humility and inadequacy when at a luncheon on September 15, 1949, the late Dr. Robert B. Irwin symbolically and actually turned over to me the keys to the front door of 15 West 16th Street. I wondered then and I wonder now whether the force for cooperative action and progressive development envisioned at Vinton in 1921 is still on course. Perhaps during the week of October 24 those who will speak to the rest of us will help us answer the most important question, important not just for the Foundation but for the entire field as well—Where do we go from here?

—M.R.B.



The Teaching of Science and Mathematics to the Blind (with section on Raised Diagrams). Report to the Viscount Nuffield Auxiliary Fund. Royal National Institute for the Blind (224 Great Portland Street, London WIN 6AA, England), 1970, iii, 154p. £1 + postage. Report on a research project conducted by Worcester College for the Blind (England). Includes 10 articles written by teachers concerning teaching methods in general science, chemistry, biology, and mathematics. Many photographs and diagrams illustrate the articles.

Second Louisville Conference on Rate and/or Frequency-Controlled Speech. Proceedings, Louisville, Kentucky, October 22-24, 1969. University of Louisville, Center for Rate Controlled Recordings (Louisville, Kentucky 40208), February 1971, iv, 408p. \$5.00. Texts of 33 conference papers plus a 46-page bibliography of references.

Guide Dogs in Australia, by Monty Hamilton-Wilkes. Adelaide, Australia, Rigby Limited, 1970, 86p. \$3.50 + handling & shipping (available from Royal Guide Dogs for the Blind Associations of Australia, Chandler Highway, Kew, Melbourne, Australia.) The story of the Royal Guide Dogs for the Blind Association of Australia, with emphasis upon the Association's Training Centre at Kew, Victoria. Includes many photographs illustrating the training procedures for both dogs and owners.

Social Interaction and Emotional Adjustment among the Blind, by Beatrix De M. Klich and George J. Wierig, Jr. *Perceptual and Motor Skills* (University of Montana, Box 1441, Missoula, Montana 59801), Vol. 32, No. 2, April 1971, pp. 516-18. The authors worked with 41 blind veterans in a Veterans Administration rehabilitation program to test the hypothesis that the level of a blind person's adjustment to his

handicap is positively related to his involvement with a group of other blind persons.

White Cane, by Gloria Yunge. *Good Housekeeping* (959 8th Avenue, New York, New York 10019), Vol. 172, No. 6, June 1971, pp. 71, 160, 162-63. 75¢. Miss Yunge relates her own experience in adjusting to blindness caused by retinitis pigmentosa, an hereditary eye disease of progressive and irreversible loss of vision.

The Handicapped: From Unteachable to Ph.D. *School & Society* (Society for the Advancement of Education, Inc., 1860 Broadway, New York, New York 10023) Vol. 99, No. 2334, Summer 1971, pp. 272-73. The story of William Butts, blind from birth, who received his Ph.D. from Columbia University in February 1971. Dr. Butts teaches history, philosophy, and religion at Virginia State College in Norfolk.

A New Project for the Rural Blind, by John Hordines. *The Braille Monitor* (National Federation of the Blind, 2652 Shasta Road, Berkeley, California 94708) April 1971, pp. 496-98. Brief report on a planned project to be conducted by the Harvard Agricultural and Rural Group for the Blind involving horticulture, floriculture, nursery operation, and the raising of worms for bait.

Blind Paraplegic Successful, by Thomas Grubisich. *The Braille Monitor* (see address above), July 1971, pp. 658-61. Reprinted from the *Washington* (D.C.) *Post*, the story of James Caldwell, a mechanical engineer before his accident in 1964, who found a new career in computer programming.

An Experimental Study of the Use of Tactual Maps as Orientation and Mobility Aids for Adult Blind Subjects, by Frank D. Maglione. University Microfilms, Inc. (300 North Zeeb Road, Ann Arbor, Michigan 48106). Doctoral dissertation, University of Illinois, 1969, viii, 145p. Order #70-

918, \$10.00. A test of the value of tactual travel maps. The study involved tape-recorded instructions, a life-size maze, and a plastic map representation of the maze. Three groups of subjects were used—early-blind, late-blind, and blindfolded sighted.

Verbalism and Affective Meaning for Blind, Partially Seeing and Normally Sighted School Aged Children, by Richard M. DeMott. University Microfilms, Inc. (see address above). Doctoral dissertation, Michigan State University, 1969, ix, 81p. Order #69-20, 841, \$10.00. Experimental research designed to compare two explanations of how words acquire meaning—(1) association with a representational object and (2) association with other words.

The Sociometric Status of Visually Handicapped Students in Public School Classes, by Stephen J. Havill. University Microfilms, Inc. (see address above). Doctoral dissertation, Colorado State College, 1969, x, 65p. Order #69-19,217, \$10.00. Study was conducted with an experimental group of 63 visually handicapped (classified as blind, low vision, or partially sighted) children, fourth grade level and above, with no other complicating handicaps, and an equivalent group of sighted students matched on the basis of sex, race, age, socioeconomic level, and achievement.

Using an Individual Characteristic (Blindness) as a Basis for Teacher Decision-Making and Curriculum Planning, by Kenneth A. Cross. University Microfilms, Inc. (see address above). Doctoral dissertation, State University of New York at Buffalo, 1969, 211p. Order #69-18,443, \$10.00. Report on an investigation of the extent to which information about available aids and increased understanding of blindness might influence teachers to individualize instruction for blind students in public school classes.

—M.M.R.



■ Dr. Jerome Wiesner, recently elected president of the Massachusetts Institute of Technology, has been named recipient of the 1971 Migel Medal for outstanding service in the field of blindness. The Migel Medal, which is awarded annually by the American Foundation for the Blind, will be presented to Dr. Wiesner at a banquet on October 27 at the Plaza Hotel, New York City, during commemorative activities celebrating the fiftieth anniversary of the Foundation. The medal is named for the late M. C. Migel, first president of the Foundation.

Dr. Wiesner, former chairman of President Kennedy's Science Advisory Committee, will be the lone Migel Medal recipient this year, as distinct from other years, when awards were made both to a "professional" and a "layman" for their services. Dr. Wiesner will receive his award in the layman category. No award is being given in the professional class.

In announcing the award to Dr. Wiesner, Foundation officials said that he was being honored because of his many years of personal interest in the development of technological research designed to alleviate the problems of blind persons, especially in the areas of reading and mobility. It was due to that interest "that an evolution occurred which created a corps of faculty and students at MIT for evaluation and/or development of sensory aids."

Dr. Wiesner also helped organize the Foundation's first advisory committee on technological research and served as its chairman. A member of the AFB Board of Trustees, he remains a member of the AFB Research Advisory Committee.

Also at the October 27 banquet, Lord Fraser of Lonsdale, the British industrialist, who has been chairman and inspirational leader of the famed St. Dunstan's rehabilitation center for blinded veterans in London since 1921, will be presented with the Helen Keller International Award for Outstanding Service to Blind Persons.

The award is made periodically by the American Foundation for Overseas Blind, an affiliate of the American Foundation for the Blind.

The British peer, who himself was a rehabilitant at St. Dunstan's in 1916 (after being blinded in action in France while serving with the British infantry during World War I), has long been active in efforts to improve services for blinded veterans, initially during his tenure as a member of the London County Council and, subsequently, following his election to Parliament in 1924. At St. Dunstan's, after making rapid progress in rehabilitation, young Ian Fraser became right-hand aide to Sir Arthur Pearson, founder of St. Dunstan's. Upon Sir Arthur's death in 1921, Fraser became the chairman.

Lord Fraser is the author of two autobiographical books, *Whereas I Was Blind* (London: Hodder & Stoughton, 1942) and *My Story of St. Dunstan's* (London: George G. Harrop, 1961).

■ Five additional agencies and one school have earned charter accredited membership in the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped: Chicago Light-house for the Blind; Evansville (Indiana) Association for the Blind; Iowa Braille and Sight Saving School, Vinton; Light-house for the Blind, Seattle; Division of Rehabilitation for the Visually Impaired, Arizona State Department of Public Welfare, Phoenix; and the Maryland Workshop for the Blind, Baltimore. There are now 33 institutions in 22 states and the District of Columbia that have been granted accreditation by NAC. Of the 23 agencies, four are the state agencies for the blind in Arizona, Maine, Rhode Island, and Virginia; 13 are voluntary agencies supported by united funds; six are unaffiliated voluntary agencies. Of the 10 accredited schools, eight are state schools and two are privately supported.

■ The Australian and New Zealand Association of Teachers of the Visually Handicapped is holding its Biennial Conference at Homai College, from January 16 to 23, 1972. The program will include courses on mobility, teaching of mathematics, and education in the integrated program, as well as a special course on teaching the deaf blind.

The New Zealand Foundation for the Blind has made Homai College available and the costs will be NZ\$2.50 a day and NZ\$5.00 registration fee. All inquiries should be addressed to Mr. G. Patrick, Acting Secretary, Homai College, New Zealand Foundation for the Blind, P.O. Box 67, Manurewa, Auckland, New Zealand.

■ As a result of legislative action in New York in July 1971, the state commission for the blind was renamed the New York State Commission for the Visually Handicapped. In another action, signed into law at the same time, the state's Mandatory Reporting Law, requiring ophthalmologists to report all cases of severe visual impairment to the state commission, was extended to include optometrists.

Appointments

■ National Eye Institute, Bethesda, Maryland: **George T. Brooks**, Ph.D., associate director for extramural programs.

■ White House Conference on Aging, Washington, D.C.: **Arthur S. Flemming**, chairman; **Webster B. Todd, Jr.**, executive director.

■ Pennsylvania Association for the Blind, Tri-County Branch, Harrisburg: **Willis R. Friese**, executive director.

■ U.S. Department of Health, Education, and Welfare, Washington, D.C.: **Merlin K. DuVal, Jr.**, assistant secretary (health and scientific affairs); **Laurence E. Lynn, Jr.**, assistant secretary (planning and evaluation); **James A. Bax**, Ph.D., commis-

sioner, Community Services Administration, Social and Rehabilitation Service (SRS); **William M. Usdane**, Ph.D., assistant director of program development, Rehabilitation Services Administration, SRS.

■ American Foundation for the Blind, New York City: **Miss Beth J. Phillips**, training specialist, Program Development Division.

Correction

In the article entitled "Gearing to Meet the Challenge of the Decade" by Warren Bledsoe (*New Outlook*, April 1971), the second sentence of the first paragraph on page 116 should read: "These I will relentlessly harry out of the field by open and above-board strictures and sanctions without any regard for influence which such persons may muster to counter-attack."

Coming Events

October 5-8 Audio Engineering Society, New York City.

October 6-8 American Association of Workers for the Blind, Rocky Mountain Regional Meeting, Helena, Montana.

October 6-8 New York State Federation of Workers for the Blind, Annual Conference, Albany.

October 11-13 National Rehabilitation Association, Annual Conference, Chicago.

October 11-15 American Public Health Association, Annual Meeting, Minneapolis.

October 12-13 American Association for World Health, 19th Annual Meeting, Minneapolis.

October 16-21 American Academy of Pediatrics, Chicago.

October 25-29 American Foundation for the Blind, 50th Anniversary Celebration, New York City.

November 7-12 American Congress of Rehabilitation Medicine, 48th Annual Session, San Juan, Puerto Rico.

November 17-20 American Speech and Hearing Association, 47th Annual Convention, Chicago.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

1972

March 19-25 Council for Exceptional Children, 50th Annual International Convention, Washington, D.C.

April 2-7 Ninth Pan American Congress of Ophthalmology, Houston.

April 17-21 European Society of Ophthalmology, Fourth Congress, Budapest, Hungary.

May 14-20 National Conference on Social Welfare, 99th Annual Forum, Anaheim, California.

May 15-19 National Braille Association, 12th National Conference (place undecided).

June 4-8 Special Libraries Association, Richmond, Virginia.

June 25-29 Association for Education of the Visually Handicapped, 51st Biennial Conference, Miami Beach.

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The Go-Sees, 166 East 92nd Street, New York, New York 10028

THE NEW Outlook FOR THE BLIND

November 1971 Volume 65 Number 9

Articles

- 281 Adaptation of Vision Following Cataract Removal
 Wilson P. Tanner
- 287 The Blinded Veteran of the Vietnam War: A Profile
 Robert L. Robinson
- 291 Recreation: A Gateway to the Seeing World
 Rose Resnick
- 297 Criss Cole Rehabilitation Center for the Blind
- 298 The Case Study Approach in an Agency for the Blind
 Frances T. Dover, A.C.S.W.

Departments

- 308 Current Literature
 Mary Maie Richardson
- 309 News in Brief

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Adaptation of Vision Following Cataract Removal

Editor's Note: We asked Dr. Tanner for some details of the preoperative condition of his vision in order to set the stage for the personal odyssey he chronicles in his fascinating report. About three years before his cataracts were removed, he lost his ability to read telephone books and, at about the same time, he began experiencing "double vision," first in the left eye and then in the right: lines in the middle of roadways appeared to be double. About 2½ years before his operation, he was unable to pass the vision test for his driver's license until he was fitted with corrective lenses. An examination of his eyes at that time revealed unaided visual acuity of 20/200 and cataracts in the center of the lens of each eye. About one year prior to his operation, his vision began to deteriorate rapidly with his night vision becoming particularly poor. Now, let him pick up the thread of his story.

On each of the last two Fridays of July 1970, I underwent surgery for cataract removal, first for the right eye, then for the left eye. From what I had been told and what I had read about the length of time required for adjustment, I saw the possibility before me of a rather extensive study of the learning required to use new sensory inputs. A number of circumstances, however, prevented my conducting a well-controlled experimental program. First, the anesthesia for the first of the operations had some violent side and after effects, probably because I was recovering from a liver problem at the same time. The second was the fact that nurses and aides in hospitals have schedules to follow; and if the schedule called for pupil dilation at a particular hour, it mattered not at all to them that I was trying to complete a test of vision. And the third was that my liver condition (sometimes called cirrhosis, sometimes called alcoholic hepatitis) required an extensive course of treatment—and I was not bubbling with an excess of energy. In fact, I was sometimes somewhat "flat," and consequently not paying sufficient attention to the conduct of a controlled experimental program. What follows, therefore, is not the result of a scientific study, but rather the report of a lay observer of some visual experiences, though still an observer who knows a little about the science of vision. I feel that the observations are worth reporting, and I hope that they may prove useful in the understanding of visual experiences, provided a little caution is exercised on the part of the reader.

□ To help the reader in evaluating my report, I will attempt to supply a framework drawn from my own theoretical position, since without knowledge of my position the reader may not understand why I have observed the particular events I have, and why I observed them the way I did. In other words, I am an individual with strong biases, biases which determine, at least in part, the types of things I observed and which exercise a strong influence on my interpretation of what I have observed. The very fact that I consider the role of biases so important

WILSON P. TANNER

Dr. Tanner is with the Sensory Intelligence Laboratory, University of Michigan, Ann Arbor.

The Author's Theoretical Position

reflects my belief that the role of biases is the same whether I am playing the part of the subject or the experimenter; the relevance and importance of biases would not change were the subject and the experimenter different people. (In the latter case, however, the subject's behavior may be less influenced by the experimenter's bias than when both coexist in the same body.)

It is my position that the observer can be described as behaving within the framework of a statistical decision theory model. That is to say, he accepts information about his surroundings by accepting energy generated in or reflected by aspects of the environment and analyzes the form of this energy to find which one of a set of alternative hypotheses might have led to the particular form of the energy. The hypotheses he accepts are the ones he reports if asked to describe what he perceives; it is also his experience. The experimenter behaves in the same way. He is also an observer who behaves according to statistical decision theory. Thus, as a scientist, I had finally found a subject who observed somewhat as I expected him to, because he knew how I expected him to behave. My reports of his (my) behavior may be overly subjective, because I *approved* of the way in which he (I) observed.

□ I had been well prepared by my doctor about what I should expect. I had also read a paper by a surgeon who had performed cataract operations and had personally experienced cataract removal. In the paper, the surgeon describes his experiences during recovery and the steps he took to bring himself to a condition where he could again perform the same operation. It is my definite feeling that knowing what to expect, or knowing the condition from which I had to start relearning, was exceedingly valuable in my own recovery.

I had been told that some patients closed their eyes and refused to open them, but I had not been told what led to this behavior. For all I knew, it could have been the result of discouragement, for I was not told (or I did not hear) that the behavior occurred after the very first attempt to open one's eyes. Indeed, when the patch was first removed and the surgeon looked into my eye for the first time, my first experience was of a very bright flash, almost like a visual explosion. My immediate inclination was to close my eyes and to keep them closed in order to escape the pain; but having often experienced the discomfort of bright sunlight when leaving a dimly lit restaurant after lunch, I opened my eyes again. I found, then, that it was only a matter of seconds until my eye light-adapted. That was my first hurdle.

From this point on, I found that the difficulties I experienced were not as severe as I had been led to expect. My first impression was that colors were far more vivid than I had been led to expect and that the objects in the world I live in were much larger than I had previously thought them to be. Not only were they larger, but they now appeared to be closer than they used to be. Yet the assumption of their closeness turned out to be an error, for if I took a quick glance at a table and attempted to place an object on it, I only succeeded in dropping the object

The behavior of the observer

Preparing for the Operations

On first opening the eyes

Color, size, and distance of objects

on the floor. A couple of experiences like this later found me watching my hand as it approached the table.

It has been difficult for me to understand the observed relationship between apparent size and apparent distance. At first thought, it seemed to me that if the apparent distance was less than the real distance, then apparent size should also be less than real size. That is, the apparent distance should decrease as apparent size increases, and vice versa, if the retinal image stays constant in size. What, then, is the cause of the apparent size and apparent distance decreasing together? Perhaps the spectacles, in some way, introduced a factor influencing the size of the retinal image and its dependence on the ratio of the real size to the real distance. Such a change might lead to a change in the same direction if one is relying on experience gathered prior to the change.

□ Let us examine this statement on a slightly more formal basis. The relationship between apparent size and apparent distance can be stated as in Equation (1), where AS means apparent size, RI is the size of the retinal image, and AD is the apparent distance. The size of the retinal image can be stated as in Equation (2), where RS and RD refer to real size and real distance, respectively, and k is a constant dependent upon the magnification of the lens. Substituting (2) in (1), the relationship between apparent size and apparent distance can then be stated as in Equation (3). Thus, if the retinal image stays constant, then apparent size and apparent distance increase or decrease together, as the case may be. This is true as long as the relationship is strictly dependent on optical phenomena.

Let us remember, however, that there had been a change in the purely optical relationships, and that there had been visual experience prior to the time of the change. For example, the apparent size of an object in my hospital room was at least partially dependent on one day's acquaintance with the room preoperatively, and with constant visual and physical contact with similar objects over a period of many years. I knew also the distances to the walls in my room from my one day's acquaintance with the room. Under these conditions, an increase in the size of the retinal image led to the impression that the object seen was considerably larger than it had appeared previously and, since it was larger, that same-size retinal image would occur were the object at a greater distance. According to Equation (3), if the apparent size increases when the ratio of RS/RD remains constant, and if k increases as a result of the (postoperative) change, then the apparent distance will decrease with respect to the real distance. The result is dropping objects on floors rather than on tables and bumping into objects which appear further away than they are.

Whether all women looked like Helen of Troy, as the surgeon's paper suggested, I don't know, for I don't know what Helen of Troy looked like. Nurses who entered my room, however, were startled when I would ask them to turn sideways. Some of them *were* darn good-look-

Relationship of size and distance

Equations

$$AS = RI \times AD \tag{1}$$

$$RI = k \frac{RS}{RD} \tag{2}$$

$$AS = k \frac{RS}{RD} AD \tag{3}$$

Preoperative visual experience

Beauty

ing, and this might be attributed to my improved vision. I cannot be sure of it, for even with the cataracts, there were many good-looking, or even beautiful, women in the world. Not having kept accurate statistics on the fraction of women fitting the category, I cannot say whether or not the fraction increased or decreased as a result of the operation.

□ As had been predicted, I noted a curvature on vertical surfaces. This made corridors wider at the top and bottom than they were halfway up the wall. Doorways showed the same distortion; if the door opening were narrow to begin with, I tended to venture through them only with hesitation. What I had not anticipated, however, was that my distance judgment did strange things to flat surfaces like floors and table tops. As a result, walking down a corridor was much like walking behind a wave, the floor at a distance seeming to be higher than the floor area close to me. Indeed, if I did not keep my attention on the floor close to me, my feet would not make contact with the floor at the same point in time that I expected them to. I think this caused me to stagger from time to time and to have a slightly nauseous feeling akin to being seasick, although I have never been seasick.

I had been warned that I could anticipate bumping into a good many objects. My first attempts at walking in rooms which were rather completely furnished did lead to some of this kind of collision experience; this seemed to be especially true in the living room of the apartment in which we lived at the time. I would take a quick view of the arrangement of the furniture and then chart a course of travel through the field of objects. Because my distance judgment was not accurate, I frequently deviated in the path of travel sooner than I should have, and this led to the collisions. The result was easy to correct: all that was required was to take more frequent sighting and introduce corrections accordingly.

The need for frequent corrections seemed rather surprising to me and I gave much thought to the problem of discovering how the visual information I was receiving through my postoperative eyes differed from that I had been receiving preoperatively. The most reasonable guess it seems to me is that as my distance vision improved during the recovery period, the information I received, as far as it went, differed very little. There was, however, something missing. Preoperatively, the need for new sightings was indicated by warnings received from peripheral visual cues. Postoperatively, I seemed to be operating with tunnel vision, the size of the tunnel being determined by the size and position of the spectacles I was wearing. Thus, I had little or no peripheral vision through which I could receive warnings of error. I was forced, therefore, to rely on other sources for this information. I did this by continual monitoring of the path I was following to keep the information current. It was as if I were now relying on memory for the end-point of an excursion and on current information for charting and correcting the travel course—whereas preoperatively I relied on memory for the charted course while keeping my attention on the end-

Distortion of Vertical Surfaces

Bumping into things

"Tunnel" vision

point. I cannot help but wonder what differences a contact lens will make.

While walking outside in the city, I encountered very great difficulty in judging the height of curbs. Stepping from the sidewalk to the street was a move I took with considerable hesitation; stepping up from street level to sidewalk level led to some toe-stubbing. A deliberate overshoot took care of this latter difficulty.

□ After I had managed to master the problem of mobility, I undertook the task of learning to drive again. Visual acuity tests indicated that my corrected vision, with the temporary spectacles, was 20/30. Since I met the criterion for the driving test, I began driving short distances over some routes that were well-known to me. By keeping the trips short, I was able to keep my level of concentration high, thus allowing for the shortcomings I had observed in other situations. The fact that the routes were well-known means that I had long been familiar with the danger points along the routes, as is my custom for routes I cover frequently. By September 2 (about five weeks after the second operation), I was ready to undertake daylight driving for an extended period of time, and my wife and I drove from Kingston, Ontario, to Ann Arbor, Michigan, that day. I drove about 400 miles of the trip, including that part through customs and through Detroit via the expressways; and I achieved this without any close calls.

On September 3, I began my teaching and lecturing duties again, and encountered only one element of disturbance: by writing in large script on the blackboard I could see what I had written, but the blackboard represented a convex surface which for some reason bothered me a great deal. I was obviously operating in a space which could best be represented by something other than plane Euclidean geometry. Through some process unknown to me, I progressed through the task of mapping this space on to Euclidean space. Today, somewhat over two months later, and about three and a half months after the operation, I am again living happily in a space which is closely approximated by a Euclidean geometry. The halls in the building in which I work can now be represented by straight lines and doors are no longer the threat they were. I am still startled by the lack of peripheral vision, which leads to people showing up directly in front of me without my seeing them maneuvering to get into that position; and it also makes it possible for people to place things like a full cup of coffee in front of me without my observing either the process or its end result. This has not yet led to any accidents and, since I am beginning to appreciate their likelihood, it is becoming steadily less likely that there will be an upset coffee cup.

□ As I pointed out at the beginning of these remarks, I had planned to conduct a rather extensive postoperative recovery experiment. And I did get started on one phase of it: an experiment in judging the direction of a set of parallel black lines on a white disk. The lines could run in one of four directions: horizontal, vertical, ten-thirty (diagonally top

Learning to Drive Again

Later adjustment

Experiments

left to right bottom), or one-thirty (diagonally top right to left bottom). The experiments were conducted without the aid of corrective lenses at the time I was first permitted to take the patch off my eye. I established a condition under which I was able to judge the direction correctly 75 percent of the time with my right eye (this was two days before the operation on my left eye). I did not repeat this experiment until I was permitted to remove the patch from the left eye. At that time I was able to judge the direction correctly on each trial during the run, first with the right eye, then with the left eye. In other words, the performance with the left eye was immediately close to that of the right eye, without the prior practice that the right eye had had. It was as if the input to the left eye, since it was similar to that of the right eye, was interpreted in the same fashion. I would like to think that this meant that the hypotheses had been defined centrally during the first session when the right eye was used, and that these hypotheses served as the reference for comparison with the input from the left eye later. But the experiments were not sufficiently profound nor extensive to permit the conclusion, and it is now, unfortunately, rather too late to design and continue the program.

□ In sum, I would say that I profited very greatly from the conversations I had preoperatively with my surgeon. As a result, I am rather surprised when I hear of the difficulty that some persons have experienced after cataract removal. Though I had the advantage of being well-prepared by past research and by my association with other vision scientists, I think that preoperative instruction could serve to prepare a patient in what to expect and thus reduce his postoperative nervousness. I also think that postoperative training procedures could be used more effectively in recovery, rather than leaving the patient on his own to find out how he can use his new vision. Thus, both pre- and postoperative procedures can be developed and then modified as more knowledge becomes available.

I am very grateful to Dr. David Rosen, who performed the operations on my eyes; I feel that I have had my vision restored (the most recent tests indicate a visual acuity of 20/20 in the left eye and 20/15 in the right eye two months after the second operation). Dr. Rosen explained carefully to me what I should expect postoperatively. His staff gave me excellent and friendly care. Some of the members of the Department of Psychology at Queen's University, Kingston, Ontario, spent considerable time discussing problems in vision with me; among them were Drs. Peter Dodwell, David Murray, and Lola Cutty Wiebe, and a graduate student, Martin Kay. My son Bill assisted with the testing in an interested and intelligent fashion. Dr. Wiebe's husband, Melville Wiebe, and I had a number of philosophically oriented discussions which contributed to my thinking and to interpreting my experience. Finally, I owe a great debt of gratitude to my wife which I shall not discharge in a lifetime; she exhibited patience and tolerance I never suspected. She was a source of strength throughout the entire hospital experience and never wavered in her devotion during the time when the liver problem was busy being created.

Conclusions and Recommendations

Acknowledgements

The Blinded Veteran of the Vietnam War: A Profile

More than 45,000 young Americans have been killed in the Vietnam war, and more than 301,000 have been wounded. Many of those blinded in action are also victims beyond having lost their sight; some have also lost one or both legs, an arm, or have been paralyzed. The extent of injuries inflicted upon today's fighting men is a result of the type of war that has been and is being fought. Also, the fact is that through field medical help, immediately available via helicopters, many more lives are saved than had been possible in World War II, even though the percentage of casualties (not deaths) is higher than in World War II. While everyone is indeed grateful that these lives are being saved, we must never lose sight of the fact that these newly blinded, and frequently multiply impaired, young men have a future to face and lives to be rebuilt against odds which most of us cannot comprehend.

□ Who is today's blinded veteran? And what is happening to him when, after many months of hospitalization in Veterans Administration hospitals and rehabilitation centers, he returns to his home, whether it is a farm in the hills of Kentucky, a duplex on the upper east side of Manhattan, or a ghetto tenement in any one of the nation's larger cities?

During his tenure in the various types of VA facilities, the young blinded veteran often feels that he is still being regimented and that he is being subjected to an authority which he may resent or which he may not understand. He may feel that his independence is being challenged, his manhood and maturity questioned. It is the nature of the young today to want answers and reasons for the various types of therapy or treatment they receive. It has been reported in a recent paper issued by the Veterans Administration that "the routine reply 'doctor's orders' is not sufficient whether given by the aide, nurse, or physician himself . . . unless rules 'make sense' to the young veteran he often will not accept or respect them." The same paper states further that "another characteristic common to the young veteran is the expectation that authority, whatever its form, will *not* be responsive to his intense need to be treated as an individual with a right to a voice in things that affect him." The newly blinded veteran may tend to identify the VA with the U.S. military establishment.

□ As much as the young, newly blinded veteran may question the attitudes and treatment of the professional rehabilitation staff while he is hospitalized, he nevertheless is aware that without this rehabilitation training, a return to normal life would be extremely difficult, if not impossible. The stay in the hospital and later at a VA rehabilitation center is a prelude in which he is prepared for a return, if possible, to

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Today's Blinded Veteran

Questions and doubts

Rehabilitation Is Necessary

his former job or for entry into a training program for another type of work. He may be encouraged to go to college or to return to high school. During the course of his rehabilitation he may be made aware of new vistas, of possibilities that may not have occurred to him before his injury. And he becomes deeply aware that he will be competing with his peers who will often be disdainful of or ignore his handicaps—his attitudes and theirs are “today.”

Sometimes today's war blinded veteran is viewed as a pawn of the U.S. military establishment and not, as was the World War II blinded veteran, as a hero injured defending his country and the human freedoms. There are no victory parades for today's returning veterans. Evidence of this is to be found in the fact that today's blinded veteran is expected to make it on his own. Even though he may be multiply impaired, he is expected to become rehabilitated, to return to his community, and to contribute to it—to achieve. Nevertheless, the newly blinded veteran often does not have the knowledge, the sophistication, nor, indeed, the energy to work his way through the morass that must be traversed if he is in any way going to move forward and to live as a purposeful, dignified human being, even though blind and often severely disabled in other ways as well.

□ Studies carried out after World War II suggest that a devaluation of self takes place on the part of the newly blinded individual, as well as among his friends and neighbors.¹ As a consequence, the young veteran feels himself to be less of a human being than he was before he lost the particular physical attributes that were naturally his and without which he never would have been mustered into the military service of the United States. The wounded veterans of World War II who returned to their homes and who also faced the problems just mentioned were initially greeted as heroes. The wounded veterans of today's conflicts return home with the same problems and losses, usually multiplied, but the warmth of their reception varies and it is felt almost universally that they are not heroes. This is a different time and a different world.

The transition to community life among civilians after having grown accustomed to a “care” situation during his stay in the hospital and in the rehabilitation center may present hazards which the newly blinded veteran had not contemplated. He may or may not have a family member or friend who believes in him (but who does not overprotect him) and who will stand in line with him to register for classes and help him in such everyday activities as shopping and going to the barber shop. During his rehabilitation he has been taught the use of mobility aids, largely with the help of other human beings. Now he must rely more fully on himself, using the techniques he has learned, to function as a person without sight. He must learn to cope with an entirely new set of attitudes, both his own and those of other people. He may in the beginning go through a period of sensitivity and vulnerability, of feeling “too” different. These negative attitudes, understandable as they are, must be overcome if he is to make a success of his new life as a blind

Seen as pawn rather than as hero

Reaction to Handicap

Adjusting to civilian life

person. He must make full use of every sensory aid he has been taught to use—reading braille, using his braille watch, substituting radio and television for the daily newspaper, and talking book records and cassettes for books and magazines.

This is indeed a large order, but it need not be so bleak as it sounds. He must remember that he has friends at the nearest VA center, some of whom are largely responsible for assisting him and others like him in establishing themselves in a job, counseling them, and encouraging them to continue their education at whatever level and in whatever area they are best suited and/or in which they are interested. If he takes advantage of these opportunities he will find the transition from the protective umbrella of the hospital and rehabilitation center an easier one. However, according to the U.S. Office of Education, veterans of the Vietnam era have participated in federally sponsored education benefits at a lower rate than either World War II or Korean conflict veterans. Why?

The VA can help him

□ But it must be remembered that not every newly blinded veteran has a desire to have any further contact with what he himself may feel is just an extension of the military. He may want to “go it alone.” Consider, for example, the case of Joe, a real individual and therefore one who differs from other individuals in the specifics of his situation, but who is generally typical in his reaction to his new condition in life as a multiply impaired blinded veteran. Joe is a Marine who was wounded by a hand grenade and who sustained amputation of both legs below the knees and one arm below the elbow, in addition to losing the sight of both eyes. Although he had the sympathetic understanding of some members of his family, he seemed unwilling to cooperate with the Veterans Administration in their efforts toward helping him to further his education and to aid in his adjustment.

The Example of Joe

Joe had been fitted with prostheses for both his legs and his left arm, and had seemed elated when he had learned to walk and to use the hook on his left arm prosthesis to hold a specially adapted long cane. He also carries a regular wooden cane in his right hand for support. Being ambulatory was his initial goal. Beyond that he was listless and unresponsive to suggestions that he use his time at the rehabilitation center to learn new skills and to study braille and typing. He requested that he be allowed to go home and did so, with the understanding that he would keep in touch with his nearest VA center and continue his rehabilitation in his home. He did have some contact with the Veterans Administration, but eventually that dwindled to only an occasional request for such items as an electric razor, a radio, and a tape recorder. He rarely kept his appointments with the VA and the last they were able to learn was that he had told his family that he only wanted to have fun, to “party.” It has been suggested, but not definitely ascertained, that marijuana was a part of his fun. It was known, however, that he did do considerable drinking, spending most of his evenings in various bars with groups of friends.

Short-term success

How might Joe discover that there is more in his young life than "friends" (who, mainly, were his guests in the bars, with the drinks being mostly on Joe) and partying? What can and should be done, beyond what has been tried so far with so little success, to motivate Joe to make a more vigorous effort to live a more fruitful and productive life? Perhaps he could be reached through the Blinded Veterans Association, since that organization, of all those that might have tried to help, is made up of men who have at least one of his problems in common—blindness caused by wounds incurred in service.

Trying to motivate Joe

□ The Veterans Administration, at the request of this writer who was acting on behalf of the Blinded Veterans Association, has given the names and addresses of newly blinded veterans to the BVA. While the BVA, at present, does not have any field service program, efforts are being made to direct attention to the newly blinded veterans of the Vietnam war. At the twenty-fifth annual BVA convention held in New York in July 1970, the first "round table on the blinded veteran of the Vietnam war" took place. Another "round table" was held at the 1971 convention in Miami. In other ways, notwithstanding its limited resources, the BVA is attempting to "reach out" to these newly blinded men. They will be placed on the mailing list to receive the *BVA Bulletin*, the organization's periodic publication containing items of interest and information essential to blinded veterans.

The Role of the BVA

After World War II, the U.S. Veterans Administration had a cadre of special rehabilitation counselors whose job it was to reach out to the severely disabled veterans of that war, including the blinded veterans. These professional rehabilitation counselors helped many to involve themselves in training under the GI Bill. Today, there are no special rehabilitation counselors in the VA to provide outreach services such as those offered 25 years ago. Instead the blinded veteran today receives letters from the VA urging him to utilize the benefits due him. At present, the Veterans Administration Central Office is involved in a survey of their Visual Impairment Service program nationally which may provide much needed information about the current situation of the blinded veterans of the Vietnam era.

Special rehabilitation counselors after WWII

□ For reasons mentioned above, today's newly blinded veterans too often become bogged down and remain depressed much longer than is healthy or necessary. There is considerable concern about this group of newly blinded veterans, but many questions remain unanswered. How many received rehabilitation services at one or the other of the VA rehabilitation centers? How many, because of severe multiple impairments in addition to blindness, are unable to undertake this training? What happens to the newly blinded veteran after he leaves the VA system and returns home? How many blinded veterans who have some

Unanswered Questions

(Continued on page 306.)

Recreation: A Gateway to the Seeing World

The literature on adjustment to blindness is chiefly concerned with the importance of diagnosis, evaluation, counseling, and vocational training. Conspicuously absent are discussions and appraisals of the role of recreation in the process of personal and social adjustment even though blindness is acknowledged to be as much a social as a physical handicap.

In its fullest potential, recreation can provide a milieu in which the total personality may be observed and brought into play, one in which beginnings at least may be made in developing strong, sturdy bodies, skills of various kinds, and an awareness of the pleasure of sharing with, contributing to, and receiving from members of a group.

□ Originally, blind children in the United States were educated in residential schools. Although these schools were segregated, and limited in many ways, administrators were unanimous in recognizing the importance of physical education for the blind students. Curricula included swimming, bowling, wrestling, tumbling, and calisthenics. In the past 20 years, blind children have increasingly been included in public school programs. In the process, however, physical education, as well as training in practical and social skills, have been either entirely overlooked or only marginally provided. This omission has partly occurred, no doubt, because of the lack of widely divergent needs of blind children and the lack of acquaintance with the special techniques required for teaching the necessary skills.

It is taken for granted that vigorous physical activity is important to the health and well-being of sighted children. Such activity, however, is even more important for blind children, because the average blind child lacks both motivation and opportunity for free, varied movement. He cannot learn to run and play by imitating the actions of other children. Overprotection at home and the current high incidence of secondary handicaps reinforce his feelings of inadequacy and dependency. Unlike the seeing child who runs errands for his mother, helps his father with chores, learns to use simple tools, handles game equipment, plays on the street, and participates in athletics, the blind child is sedentary, often idle, and isolated from the joys of bodily exercise inseparable from normal childhood. He has the same physical need to use his body as does the sighted child, yet the sad fact is that the blind child's leisure activity is too often mainly spent in listening to the radio or television.

As a result of this deprivation, many blind young people lack vitality and physical stamina, have poor posture, and, minus outlets for the release of nervous tension, develop such "blindisms" as rocking, twitching, probing at the face, shaking the head, and sticking fingers in the eyes.

□ The California League for the Handicapped teaches blind children to

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Recreation for Blind Children



Goals of CLH Recreation Program

use their bodies and to develop powers which sighted children accept as natural endowments. The goal of this effort is to prepare the individual to move out into the community. It may seem anachronistic to find positive values in a specialized program for blind children at a time when their full acceptance into the services and facilities of the community seem closer to realization than ever before. In the League view, however, the specialized agency can offer the following advantages: 1) An environment in which blind children can gradually and realistically approach normal participation with seeing children; 2) The availability of adapted tools and equipment to meet sensory limitations (in books, games, and some sports); 3) Guidance, counseling, and supervision by trained staff; and 4) Opportunity for a comfortable learning environment. Blind children are less likely to develop frustrations and feelings of inferiority when their beginning learning experiences (physical and manual) are with children sharing similar handicaps. Opportunities for achievement can be planned to allow each child an experience of success.

Of primary importance to the success of any recreation program are the quality and competence of the staff. The gains of the children—the pleasure, motivation, learning, participation, achievement, adjustment—depend, in large measure, upon the warmth, skill, judgment, maturity, imagination, and honesty of the staff. They must be friendly, but objective. Ideally, their relationship is a composite of older sister or brother, friend, and confidant. It is the enthusiasm of the staff, and their belief in the potential of these children, that determines the extent to which the recreational experience will have enduring meaning in their lives.

In many ways, recreation provides the ideal environment in which blind children can be motivated and encouraged in at least the beginnings of independent mobility. Swimming, boating, hiking, games, and dancing bring into play their powers of coordination, sense of direction, balance, and articulation of muscle. These have a direct bearing upon their progress in learning to move about freely and with pleasure from place to place. Of course, the degree to which they can achieve freedom of mobility depends on their attitude toward and opportunity for independent functioning in early childhood, together with acuity of their senses and their memory, interest, and powers of observation.

□ In addition to the usual therapeutic effects of hiking—deep breathing, improvement in posture, increased physical endurance, muscle strength, improved circulation—blind hikers develop a kind of foot intelligence. They learn to distinguish with their feet between types of terrain, angle of earth incline, adjustment in body weight, and adjustment in the rhythm and pace of walking. The children learn how to step on and over rocks, pebbles, earth, plowed ground, and sand; how to accelerate their pace to walk comfortably with a partner and keep up with a group. Some children have never ranged out from their living quarters at home, some not even from their own room. For them, hikes provide an expanded concept of life—space, motion, an exciting sensation tinged with adventure that is stimulating and satisfying. By being able to reach out and touch the fronds of a

Role of the leader

Mobility is encouraged

Hiking

fern, the strata of rocks, branches of trees, to hear the sound of birds and brooks, insects and animals, the wind in the trees, and to smell the fragrance of pine, bay, honeysuckle, and mint, they form a rich and varied picture of the trail.

Walks in the woods provide innumerable opportunities for blind children to see nature in its myriad forms—tracks of deer, skunk, and coon, lichens, fungi, spiderwebs, birds' nests, pine cones, ant hills, hazelnuts, oak balls, and acorns. Hikes may be planned to explore the bottoms of stream beds, volcano-created rock formations, or other geologic phenomena of the area. Also, field trips to vineyards, farms, quarries, mills, places of historic interest, town fairs, and art exhibits are valuable opportunities for the children to touch objects, animals, machinery, equipment, and figures.

□ Unlike the seeing child who derives the greater part of his understanding and enjoyment of nature through vision, the blind child is limited to tactile, auditory, and olfactory senses. Although he learns much, given the opportunity, he is still limited to what he finds at the end of his reach. Whereas the seeing child is familiar with and recognizes animals, flowers, trees, birds, fish, etc., and has generally had some acquaintance with water, these are, for most blind children, new experiences. The seeing child also knows about stars, moon, sun, mountains, clouds, rainbows, and all other distant phenomena. Special techniques can be employed to bring all these experiences within the range of the blind child and to acquaint him with the immediate face of nature.

For example, as a tree project, a leader trained in botany or nature science may compile a text in braille or on tape describing leaves of trees indigenous to the region. Cut-outs and actual specimens, mounted in juxtaposition, may be accompanied by braille labels and other information. A tree-planting ceremony may be arranged so that children may themselves select a suitable location, free the dirt so the roots may grow and be nourished, and eventually observe the blossoms and fruit.

Under the direction of farm advisers, ornithologists, geologists, or other experts, the children may examine their surroundings at leisure, ask questions, and collect specimens of leaves, fern, bark, rocks, insects, frogs, feathers, etc. Leaders may identify bird calls and, with the group, invent nature games to be played around a campfire. Field trips may be arranged to provide an opportunity to touch ducks, rabbits, sheep, cows, horses, pigs, chickens, and other animals. Books on science and nature may, of course, be a part of a braille library and records of bird songs may be used at music time or as a part of an evening program.

□ In swimming, blindness neither adds nor detracts from fear of the water. Verbal descriptions of strokes and movements, demonstrated by touch, help the children progress from day to day. Swimmers orient themselves in the pool by the sound of voices and the sound of water filtering into the pool or by the heat of sunlight on their skin. By increased muscle strength, coordination, and general physical control, the blind child achieves a sense of confidence and a new outlet for movement. He should be taught breathing, face and back float, breast stroke, back crawl, and ele-

Nature walks

Nature Study



Swimming

mentary back and side strokes. He should learn to dive off the board from a standing position, perform the hurdle, and back and jackknife dives. Many are able to achieve the form, speed, and other qualifications for Red Cross certification, at the beginning, intermediate, advanced, and lifesaving levels. Water games and carnivals may be scheduled as a stimulus to progress. Fortified with swimming skills, the blind child stands a better chance of acceptance and equal participation at any camp or resort.

In rowing, the oars may be notched to help the children keep them straight. The rhythmic motion of the exercise, the development of new muscle strength, the orientation to new space feelings on the water, and the response of the boat to the movement of wind and water, all combine to provide pleasurable experiences of health, relaxation, and learning. Leaders should instruct rowers in the requirements of water safety, as well as in efficient and graceful ways of getting in and out of a boat. In time, the children can learn to orient themselves through the sounds from the shore, the direction from which the sun or the wind is felt, and the relation of the boat's position, speed, and distance to others on the lake.

Rowing

□ Inasmuch as the blind child rarely has sufficient opportunity for exercise, games are of special significance for conditioning, muscle building, body confidence, release of pent-up emotions, etc. In playing baseball, the ball may be rolled by the pitcher to the batter, basemen helping to orient runners by calling to them as they circle the bases. The achievement of distance-kicking may be the basis of point-scoring in kickball. In addition to adapted baseball and kickball, blind children enjoy bowling, horseshoe pitching, and basketball with a sound clue to identify the goal (also, the basket may be a net strung at the seven-foot level, easily within the reach of most of the players). Relays, squat tag, and various forms of "musical chairs" may be played inside or outdoors. Adaptations in sedentary games involve braille cards, braille bingo, Scrabble, and checkers.

Sports and Games

Folk dancing is an excellent medium for the development of freedom of movement, balance, sense of direction, articulation of foot and arm movement, and sense of space. Simple folk dances are done with a partner or in a circle, eliminating fear on the part of blind children to move out in a large room. These involve frequent repetitions of a series of basic movements: forward and backward, side to side, diagonal exchanges with partners, circular steps or slides around the circumference of the room, vigorous stamps or claps, arm swings, toe-heel points, and leg swings. The leader, of course, calls out instructions, assisting individuals as necessary. Whereas seeing children imitate hops, skips, slides, etc., blind children must have them described and demonstrated frequently by touch. Folk melodies, universal in their appeal, impart a sense of vigor, gaiety, and release. Without posts or impedimenta in the room, the children gradually acquire the confidence to move about freely, developing a kinesthetic sensitivity, strength and sureness of foot, and joy in a newly-discovered kind of fun.

Folk dancing

Teenagers often prefer social dancing and preparation for such an activity are occasions of great excitement for boys and girls alike. The girls are busy ironing dresses and curling hair, while boys take particular pains to

Social dancing

clean up and talk about whom they will ask to dance. For many, this is their first kind of "dating" experience. The leaders teach the steps, dance with those who may be left without partners, and help timid teenagers find partners. Boys and girls may take turns at the refreshment bar, dispensing Cokes and cookies, and at manning the jukebox or phonograph.

Materials, equipment, and supplies for craft activities should be available during the staff orientation. Students may be motivated by helping to prepare exhibits and making gifts for friends or family. For maximum learning, blind children should work in small groups. Projects may include name bracelets of copper (on which brailled initials may be carved), utility bags made of tapestry swatches, felt flowers and purses, leather wallets, wooden trays and clogs, etc. Sawing, hammering, drilling, sanding, and sewing are easily learned by blind children.

□ Under skilled leadership, dramatics may be a richly meaningful experience for blind children. The seeing child acquires a variety of modes of expression through imitation—facial expression, pantomime, bodily posture. This is not so for blind children, and the absence of it accounts for some of their differences in the social setting. Other rigidities which further accentuate their blindness are lack of freedom of movement, unnaturalness in body posture, not looking at the person being addressed, and so on. In the process of helping blind children portray life-like characters and situations, the skillful coach has an excellent medium to introduce players to the acquisition of improved posture, freer, more graceful movements, a new vocabulary of gesture, and more responsive facial expression.

The awareness of an audience which they cannot see is, for many blind children, a new experience. They learn the importance of variety of tone, volume, inflection, and range of voice. As aids in affecting freedom of movement for entrances, exits, or movements across the set, sound clues are sometimes devised, or a thin matting is laid down to indicate direction. These are only necessary until the player has memorized his direction.

Training in dramatics provides the blind child with a whole new world in which he may move with freedom and joy. Through it, he can comport himself with more ease and grace among the sighted persons who must necessarily comprise a large portion of his living experience. Sighted persons are often somewhat tentative about accepting one who is blind as "really like other people," because his motion, facial expression, gestures, and bodily demeanor seem awkward, constrained, rigid, and lacking in feeling or emotion. Given this picture of a "frozen face" or of a "dead pan" person whose movements are wooden and stiff, it is no wonder that sighted people all too hastily conclude that the blind child is "dumb," stupid, plain, queer, or odd, and hence deserving of nothing but the all too irrevocably damning epithet of "different."

□ Music serves not only as a source of expression, inspiration and relaxation, but also to dispel feelings of inferiority, to encourage group participation, and to bestow recognition on the individual. When groups first start to sing together, they are separate and individual, each one setting his



Dramatics

Voice and movement

Developing expressiveness

Music—Singing and Playing

own pace, pitch, volume, and words. Gradually, the song leader develops in them the awareness that teamwork is all-important—that one pitch, tempo, dynamics, and the same set of words must be followed when all sing together. The leader makes the process fun by using folk songs, gesture songs, rounds and part songs, so that gradually the individual becomes part of a unified group, concerned with the satisfying sound of voices, sharing and blending in one rhythm, one harmony, one melody.

A child can gain much needed attention and stature in social activities through his ability to play a solo instrument such as the harp, flute, recorder, harmonica, and trumpet. Teenagers sometimes form combos with piano, drum, maracas; younger children enjoy a rhythm band.

□ As the blind child moves out in the physical environment and takes part in many activities, he begins to reflect new attitudes toward himself and others. Challenged by opportunities for self-reliance and responsibility, and motivated by group acceptance and the exhilaration of increased participation in life, he begins to acquire a more constructive self-evaluation and to achieve more satisfying relationships with others.

Like all children, the blind child needs to feel that he belongs, that he is accepted as a person capable not only of self-help, but of contributing to the pleasure, comfort, or work of those with whom he comes in contact from day to day. Their attitudes and expectations influence the way he perceives himself. Expectations at home that are too low engender feelings of indifference and helplessness in many blind children. Some compensate with hostility and aggression for feelings of inadequacy, others by withdrawal and passivity. “. . . Blindness in and of itself,” writes Miriam Norris, “is not the determining factor in the child’s development. Rather, failure on the part of adults to know what to expect of a blind child or how to encourage his optimal development creates the problems. . . . All too frequently, his development is tragically warped and restricted because of the tendency to assume that limited function is the necessary and inevitable result of his physical handicap.”¹

In discussing recreation as therapy, S. R. Slavson, states: “In a real sense recreation can serve as a preventive-corrective for many types of adjustment difficulties. It can supply releasing physical activities, can allay feelings of inadequacy and difference through group acceptance, and can reduce the many tensions in social adjustment. Recreational activities can be so planned as to give the individual enough satisfaction to build up his ego and to establish his self-esteem. He can gain the conviction that he need not be afraid of people since they are friendly and understanding. Success, praise, and acceptance give him the security he lacks. His powers are released and, as a result, behavior grows normal and satisfactory.”²

Personal and Social Growth

Therapeutic implications

1. Miriam Norris, “What Affects Blind Children’s Development” (*New Outlook for the Blind* 50[1956]:258-67), pp. 263 and 264.
2. S. R. Slavson, *Recreation and the Total Personality* (New York: Association Press, 1946), pp. 68-69.

References

Criss Cole Rehabilitation Center for the Blind

The recently completed Criss Cole Rehabilitation Center for the Blind, in Austin, Texas, houses the state's first comprehensive diagnostic, evaluative, and training program for the visually handicapped. Named for former Texas State Senator Criss Cole, who lost his sight in World War II, and serving the clients of the Texas State Commission for the Blind, the center provides instruction in braille, typing, use of communication equipment, handicrafts, shop skills, home economics, physical conditioning, social and mobility skills, personal grooming, and management of personal finances. Also offered are a complete optical aids service, preparation for college, psychological appraisal and counseling, and exposure to a wide variety of vocational pursuits. The center is strategically located near many other state service agencies and the Texas School for the Blind. The University of Texas, whose students will be involved in research and training, is about a mile away.



In addition to offices, classrooms, and training areas, the Criss Cole Center has an auditorium, cafeteria, chapel, and library. A number of outstanding features of particular importance in the rehabilitation of clients have been included in the design of the building: corridors are finished in three contrasting floor surfaces (carpet, brick pavers, and terrazzo); in addition to standard doors, there are revolving, sliding, and automatic doors; there are conventional stairs, an escalator, and a self-service elevator; in the recreation area, there are ladders and balconies for concept training; and different kinds of walls in the outdoor courtyard provide training in sound differentiation.

A second phase of construction, which will include additional lecture rooms, physical conditioning area, and residential quarters for clients, is scheduled for completion in September 1973.

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The Case Study Approach in an Agency for the Blind

We are living in a time when all values are being challenged. Social agencies, including those serving the blind, are at a crossroads and must grapple with the critical issues of our day. Priorities and the relevance of services and programs must be questioned and evaluated; response must be made to whatever unmet needs are discovered. At the same time, the most troubled people, those with severe multiple handicaps, including blindness are increasingly seeking help from agencies for the blind. Special skills are required, perhaps as never before, to deal with the multiplicity and complexity of these problems.

Loss of vision affects the individual in all aspects of his life. First, it must be realized, the agency for the blind generally comes into the picture after the individual and his family have exhausted every avenue of medical help for the visual problem involved. As a result, the client arrives at the agency with all of his disappointments, fears, and anxieties, plus a diminished view of self. Also affected are the individual's interpersonal relationships. The other members of his family will share, often intimately, in the stress produced by the onset of blindness. As a new client of the agency, the individual will often have difficulty in relating to those who will be trying to assist him. Since the strengthening of the individual's sense of self is an important goal of rehabilitation and since interpersonal relationships will usually play an essential part in the individual's recovery, it is necessary that an approach which recognizes the client as an individual and seeks to understand his situation in life be utilized. If the members of the immediate family can also be involved in the effort, they can provide valuable support in helping the individual.

□ In social casework, the term "psychosocial" is widely used to describe a process through which information about a person and his situation is obtained and examined systematically in order to arrive at a realistic plan of help. The person seeking help is involved throughout in gaining an understanding of himself and in being stimulated to take an active part in planning and carrying out the steps to be taken. The psychosocial method of study, diagnosis, and treatment presumes an orderly process and the growth of a trusting relationship between the client and the caseworker. In actual practice, the data is usually fragmentary and the client's motivation to help himself may be quite minimal. Nevertheless, the psychosocial approach as a method keeps the focus on the in-

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The new client

The Psychosocial Approach

This article is based on a paper originally presented at a training seminar for occupational therapists, held in Baltimore on October 28-30, 1970, sponsored by the American Foundation for the Blind and the Public Health Traineeship Program, U.S. Department of Health, Education, and Welfare.

dividual while allowing for flexibility in planning and goals. In other words, the emphasis is placed on the client's response to his experience and not on adherence to a set program. In this way, the client is rarely made to feel that he is a "failure" because he has not adhered to the criteria of an established system; rather, he is helped to take each step with the reassurance and support that are so frequently needed when a person is seeking help for himself.

Complicating the psychological and emotional upheaval with which the client must contend, there are often other problems as well. For example, in the case of the older person, the loss of vision may be associated with other handicaps stemming from the aging process itself. It may be difficult to analyze this complex of difficulties, to separate specific problems from the emotions surrounding them, and to identify those areas that are amenable to positive change.

□ The following case history illustrates such a situation. The medical, social, and psychological difficulties of this client required a multi-disciplined and coordinated approach, with the client's idiosyncratic response being a central consideration in the solution.

Mrs. E. is a 77-year-old woman with bilateral cataracts and corneal ulcers. She has had visual difficulty since age 10, although the most serious loss of vision occurred four years ago. Mrs. E. applied for admission to the agency's Home for Aged Blind.

Mrs. E. emigrated from Eastern Europe as a young woman. Her first marriage produced a daughter who is now partially paralyzed and with whom there is a poor relationship. After the death of her first husband, Mrs. E. remarried and had two more children, a son and another daughter, both of whom are now married and have families of their own. The second husband died several years ago after a prolonged illness; Mrs. E. had cared for him at home, refusing to permit his hospitalization. The social history revealed that Mrs. E. had suffered great deprivation as a child, having been orphaned at an early age and shifting for herself throughout childhood and adolescence.

Mrs. E. had lived a very circumscribed life, one centered in the home and family. She and each of her husbands worked hard as superintendents of the apartment house in which they lived, receiving free rent and a small stipend in compensation. They rarely ventured outside the immediate neighborhood. All three children were born at home without medical assistance. Mrs. E. kept a tight rein on the family and the children later also settled within the same neighborhood. Mrs. E.'s greatest pleasure in life was cooking and baking for her family and neighbors; it was her way of expressing love to those close to her.

Mrs. E. is pleasant, outgoing, and child-like in manner. Demanding at times and easily overcome by new experiences, her initial reaction to any stressful situation is to revert to helplessness and expecting others to do for her. She continuously sought reassurance from the caseworker with whom she appeared to have a trusting relationship. She also felt close to the daughter of the second marriage—this daughter had initiated the application to the agency for placement of her mother in residential care.

Mrs. E. was still living in the same apartment in which she had been living for a great many years. Both the building and the neighborhood, however, were deteriorating rapidly and Mrs. E. was terrified of the violence in the area. She had

Multiple handicaps

Case History—Mrs. E.

Social history

Personality

Internal conflicts

once tried, though unsuccessfully, to live with her daughter. She felt trapped between her longing for safety and protection in her later years and her desire to remain independent and in her own home despite her almost complete loss of vision. She was, by turns, greatly depressed and determined to control her destiny during her remaining years.

While Mrs. E. struggled with her decision to give up her apartment, the caseworker continued to help her in the completion of her application for admission to the Home for Aged Blind. Mrs. E. strongly resisted an ophthalmological examination, one of the admission requirements, but finally agreed to it—more as a favor to the worker than through any conviction that it would be helpful to her. The examination revealed that eye surgery could indeed be helpful in restoring some of her vision and that course was recommended. The recommendation of surgery, however, brought a new set of issues into the case situation. Because of her many superstitions regarding health matters in general and hospitals in particular, Mrs. E. was extremely fearful and felt greatly threatened by the thought of surgery. On the other hand, the likelihood of a return of useful vision could be seen as a genuine turning point in Mrs. E.'s life.

In weekly interviews over more than a three-month period, Mrs. E.'s misconceptions regarding medical care and hospitals were corrected and the worker's caring attitude about her well-being was consistently demonstrated. When Mrs. E. did decide to go through with the surgery, it was based on her feelings that she could trust the worker and that the worker would be there to protect her. At the same time, the worker kept in close contact with the family whose influence on Mrs. E. played an important part in reinforcing the direction provided by the caseworker.

Painstaking arrangements were made for Mrs. E.'s hospital stay. She received the type of food she liked since food was very important to her, it being concrete evidence that one is being cared for. The nursing staff, which had been alerted to Mrs. E.'s fears, was most sympathetic. The worker was in daily contact either in person or by telephone during the three-week hospital stay.

The operation was successful and Mrs. E. regained much useful vision. There was a marked improvement in her physical appearance and she was more vital. She became independently mobile and expressed the feeling that she had become a different person as a result of her involvement with the agency. She actively sought to expand her life to compensate for the constriction and deprivation of her former life. She began to participate in the recreation program of the agency, including outings and a two-week stay at a summer camp.

□ What can be drawn from this case that is of general applicability? First, because 50 percent of the blind population fall in the older age range, agencies are often called upon to deal with individuals who, like Mrs. E., feel that little can be done to help them. The combined stresses of advancing age and physical disability must be dealt with and the individual's strengths and assets tapped. A detailed history, compiled through the use of interviews, is essential. What should be known about a person before intervenient measures are taken to bring about change? Since the interview is useful in achieving so many goals—acquiring factual information, providing an outlet for the expression of feelings and the release of tension, gaining insight, stimulating the client and

Ophthalmological examination

Preparing for surgery

Success

Uses of the Interview

redirecting his energies, resolving conflicts—whatever occurs, whether it is spoken or not, is significant. A good interviewer is a good listener and a good listener is one who hears not only the words spoken, but what is not articulated and what is avoided. This skill is central to the professional discipline associated with the psychosocial approach.

In the case of Mrs. E., for example, her history revealed that she had had untreated glaucoma for more than 20 years, as well as the more recently developed cataracts. Little could be done for the damage resulting from the glaucoma, but the cataracts were operable if her fear of medical treatment could be overcome. Mrs. E.'s conflict in this situation was due on the one hand to her fear of surgery and on the other to her fear of blindness and the loss of independence associated with it. It was the task of the caseworker to sort out these factors and to support Mrs. E. in overcoming that which was preventing her from achieving a more satisfying life. Expert opinion was enlisted to evaluate the chances for the success of the surgery and the sufficiency of Mrs. E.'s emotional staying power if the results were poor. The positive responses of the ophthalmologist and the psychiatrist who were consulted allowed the caseworker to be firm with Mrs. E. and to offer her the reassurance that surgery would indeed be beneficial. It was also noted that Mrs. E. often spoke about her one daughter and rarely about her other two children. This meant that this daughter carried more influence than the others and it was to her that the worker turned as an ally in helping Mrs. E. in undergoing surgery and a hospital stay.

□ The psychosocial approach requires that the worker learn to know the client in a total way as he really is and how the visual loss affects him. The key to the effective use of the psychosocial approach is acceptance—acceptance of the person as he is, his life style, his past experiences; acceptance of his right to his own idiosyncratic behavior (as long as it is not destructive to others); acceptance of his right to whatever choices exist for him as an individual. Through such acceptance it is possible to develop the trusting relationship so important to all of the helping professions.

The confidentiality of the information shared is, of course, essential. The client must believe that the caseworker safeguards the information that is imparted to him, and uses it only on his behalf. To do this, the client should be informed of the importance of sharing and providing full information, the use to which it will be put, and who may have access to it. While the worker is obligated to safeguard the information supplied by the client, he is also obligated to use this information constructively on behalf of the client. As is clear from the case of Mrs. E., the caseworker must often share information with other professionals whose collaboration is needed. No one person is trained to deal with all of the many complex and multi-faceted problems that arise in helping clients. Finally, the importance of recording the case material itself should not be underestimated, for it permits the worker to examine and

Importance of taking a complete history

Acceptance Is the Key

Confidentiality and obligations

evaluate it in an organized way while at the same time providing for continuity of service should there be a change in workers before the case is terminated.

□ The following case illustration presents other dimensions in study and intervention which arise in the day-to-day work of an agency for the blind:

Case History—Mr. S.

Mr. S., 35, has been a diabetic since childhood, is married, has two small children, and has worked for 10 years as a draftsman for a large engineering firm. He has had unsuccessful pituitary surgery, and is rapidly losing his vision. Referral was made to the agency by his physician who indicated that nothing further could be done medically to save his sight. Mr. S. is depressed and continues to deny the reality of his visual loss. On the day of his initial interview, in fact, he was to receive a university degree in engineering. Although he had lost the sight in one eye a year ago and only had completely blurred vision in the other eye, his denial had prevented him from switching to a more reasonable course of study. There were also other disconcerting symptoms, including neuropathy in one leg that indicated the beginning of kidney involvement.

The first interview

At the first interview, Mr. S. was accompanied, at the suggestion of the intake worker, by his wife. He was extremely nervous, although he tried to make jokes and to hide his anxiety. Mrs. S., an attractive woman, appeared to be intelligent and mature. They had brought one of their children to the interview and he seemed happy and responsive. Despite appearances, however, it was clear that Mr. and Mrs. S. were seeking answers to some long-standing and deep-seated problems. All that could be offered them at this time was an interest in seeing them again, both separately and together. They accepted this offer of continued contact.

Deep-seated problems

In subsequent interviews, a number of revealing facts emerged. The marriage had been a stormy one. Mrs. S. considered her husband passive and herself unresponsive. Their sexual life was poor. Prior to her husband's loss of vision, Mrs. S. had frequently thought about a separation. She had married when only 17 years of age to escape a difficult and unhappy home in which she felt unwanted and inferior. Mr. S. had not been the man of her choice, but she had wanted to prove to her mother and her sister (whom she felt her mother favored) that she was desirable and accepted by a man. She accused her husband of being unfeeling toward her and the children and expressed resentment and bitterness toward him. She took much of her anger out on the children who were beginning to show the effects of the charged atmosphere around them.

Mr. S. was much less free in talking about himself. Whereas Mrs. S. intellectualized, showed open and extreme anger, and projected all blame on her husband, Mr. S. is more subdued and much more aware of his feelings, which he then tries to repress and deny.

The Lessons of This Case

□ What stands out most in this case is that surface appearances can be very misleading and that, through extensive personal and social history-taking, a vague request for help can be clarified and the appropriate help provided. Both Mr. and Mrs. S. are personable and likable, but their hidden anger and resentment began to emerge, at least with Mrs. S., by the third interview. Once begun, the pent-up feelings burst forth like a flood. Often such a release with the aid of a sympathetic, non-judging listener will have a cathartic effect on the individual. In this in-

stance, however, the mere expression of anger was insufficient—the deep-seated resentments and conflicts had festered for too many years. Intensive counseling was clearly indicated.

This family was brought to the attention of the agency for the blind only with the final deterioration of Mr. S.'s vision. Without this, it is doubtful that this couple would have sought help from any agency. By taking an interest in them as people and in their life situation as a whole, the agency was forced to deal not only with the specific problem of blindness which they faced, but also with the other problems which the blindness had brought to the surface and which required their attention before Mr. S. could properly utilize adjustment services. The concrete assistance needed by Mr. S. to cope with his visual loss was not minimized, however, and vocational counseling and planning were immediately instituted, as were mobility instruction and other rehabilitation services. Nevertheless, it was marital difficulties that were destroying this family and marital counseling was therefore the crucial service provided by the agency.

□ Why were the S.'s not referred to an agency specializing in marital counseling? The answer, simply stated, is that because of the blindness they would have been referred back to the agency for the blind. Even if their situation had been accurately diagnosed as one involving their relationship rather than the impact of blindness, they would still have been referred to the agency for the blind. Many community agencies are either fearful, unwilling, or consider their staffs incapable of rendering service to individuals who also have a visual handicap, even when the problem existed before the onset of that handicap. The blind person in need of help, therefore, is placed in the position of applying to the agency for the blind or of going without assistance. This attitude in the community requires the agency for the blind to be prepared to deal with all the problems of blind persons and to provide staff who can both recognize and deal with social and personal problems that are essentially unrelated to blindness and its effect on the individual.

□ Agencies for the blind are also being confronted by another challenge of rather recent origin, namely, the young men blinded in combat in Vietnam. Through government services, these veterans are provided with all possible training and rehabilitation as soon as they are physically able to benefit from such services. The government also carries full responsibility for the economic needs of such individuals. On the other hand, the family's adjustment to the returning blinded veteran is often left completely untouched. The following case illustrates this point.

Contact with the agency was initiated by Mr. G.'s wife, who telephoned at the suggestion of the Veterans Administration. She was unclear about her reason for calling. Mr. G., 21, had been a factory worker before his induction into the armed services. He had been severely wounded after seven months of service. His loss of vision was an immediate consequence of his injuries and although he had undergone surgery several times, he had only light perception in one

Blindness as a precipitating factor

Referral to Other Social Service Agencies

Case History—A Blinded Veteran

War service

eye. He also had shrapnel in various parts of his body and had little sensation in his right arm and hand. He wore a brace on his right leg. Medical reports indicate that there is little hope for any improvement in either his vision or in the functioning of his limbs.

At the first interview, Mr. G. appeared unkempt, unshaven, and wore soiled clothes. He seemed emotionally drained and helpless, although he was afraid to show this helplessness for fear that he would antagonize those closest to him. He knew how to care for himself, for he had received the necessary training in the hospital. On the other hand, he had lost all interest and desire to use this knowledge because he feels that it doesn't really matter to anyone. Mr. G. is basically a very simple man, one who cannot verbalize his anger or blame anyone for what has happened to him. His major preoccupation is with his wife's reaction to him as a blind person and as a man. He tries to spend as little time as possible at home, reverting back to great dependence upon his mother who herself has many difficulties in accepting him as a blind person.

Mrs. G., a petite, attractive, friendly person, has been overwhelmed by the changes wrought in her life. She recalled sadly that she had learned of her husband's condition through a telegram that merely told that he had been wounded and had been hospitalized in the Philippines. Only later, with the help of the Red Cross, was she able to learn the extent of his injuries. At the time, she and her baby were living with her mother in another city. She had had the painful duty of telling Mr. G.'s mother of her son's blindness and other injuries.

Upon Mr. G.'s transfer to the States, Mrs. G. visited him frequently. He was able to visit home on weekends, and during these visits, Mr. G. had directly and frankly asked his wife if she wanted to continue the marriage. She had said that she did. Since his discharge from the hospital a few months ago, however, the question of separation has not been broached by either of them.

There are many indications that Mrs. G. does not accept her husband's blindness. She herself described how she would walk away from him in strange places. He had called this to her attention many times but, although she had apologized, the situation was often repeated. She denies that she minds doing all the things that she does for him, but her resentment is evident. Resentment could be detected in her telling of the many descriptions that Mr. G. requested her to make concerning their child whom he had never seen. There was clear evidence that while Mrs. G. wanted to carry her responsibility as a wife—and she did appear to be quite resourceful in many ways—she had many conflicts about her role as the wife of a blind man. The undertones of fatalism and silent suffering are perceived by Mr. G., but he is unable to articulate his own feelings and reactions.

Reaction to blindness

Mrs. G.

Wife's denial of her husband's blindness

□ Mr. G. appeared to be suffering from a reactive depression, a characteristic syndrome commonly found among the newly blinded. The symptoms of this reaction, which can result from any severely traumatizing situation involving a threat to the individual's previous life adjustment, include a generalized sense of loss, sadness, and dejection accompanied by some motor retardation such as slow, sluggish movement. The individual seems bland, colorless, and lethargic; his speech and responses may be slow and low-pitched. The thought processes are generally intact and there is often a good orientation to what is happening around the subject. Although the reactive depression following loss of

Reactive Depression

vision may be intense and of extended duration, it is fortunately much less in most cases, and consists of a sense of helplessness and frustration, passivity, diminished appetite, somatic complaints, and either excessive sleep or insomnia. Final assessment of suspected pathological depressions must be made by a psychiatrist.

Mr. G.'s lethargy and withdrawal, therefore, seemed a natural reaction in coming to terms with his blindness. The caseworker's approach to Mr. and Mrs. G. was at first simply to allow them to bring their conflicts out into the open and to encourage and support them in their efforts at adjustment. At the same time, they were assured of the agency's interest in them and in the saving of their marriage. Because of the complexity and severity of the medical problems, the rehabilitation objectives in this case were limited. The economic support provided this couple by the government was raising yet another problem for them. Their economic resources now enabled them to live anywhere in the country or in their native Puerto Rico, but Mrs. G. would have liked to live near her family several hundred miles from his family, while Mr. G. thought that a return to Puerto Rico might be good for him. Until they are able to come to grips with the real cause of their conflicts, namely the blindness, these other secondary areas of difference will continue to provide unnecessary sources of conflict for them. Obviously this couple will require much help to come to terms with their basic feelings and to defuse their stormy relationship.

□ The three case situations presented above all deal with the newly blinded person who is experiencing an agonizing reaction to his recent loss. In two of these cases, the loss was gradual and accommodation was attempted for as long as possible before seeking help from an agency for the blind. In each of the cases, contact with the agency was of recent origin. Had it not been for the final loss of vision, there is a real question of whether or not these individuals would have sought help from an agency for the blind instead of continuing to struggle along on their own.

We have seen that the psychosocial approach as used in the initial contacts and in establishing a meaningful relationship between the helper and the recipient of service can contribute greatly to a total rehabilitation goal. In a multi-discipline setting, the caseworker, as a member of the rehabilitation team, is best equipped by training to utilize the psychosocial method as a basis for ongoing services.

We can also see that the questioning of priorities, an issue raised at the beginning of this article, must be carried on continuously. How equitably are the resources of the agency being used to serve the needs of the total population of blind people? For example, the emphasis in the past on children and employable adults must be shifted to include the elderly blind in a meaningful way while continuing to provide educational and vocational services to those who need them. How are agencies for the blind keeping pace with the changing social needs of our time? The past reliance on the arrival of clients at the door seeking the services

Limited objectives at first

Summary

Questioning priorities

offered by the agency must give way to new methods for reaching out to those who remain unserved because they are the least adequate, the least mobile, the most alone and unencouraged, the most fearful. Whatever method of help we have found workable and whatever innovations are yet to be tried, our central aim is to achieve a higher quality of life for the visually handicapped individuals who can benefit from our efforts.

The Blinded Veteran of the Vietnam War—Continued from page 290.

functional vision have had an opportunity to try a new electronic sensory aid—closed-circuit television—to ascertain if it enhances and improves their functional vision? How many have availed themselves of their VA educational and training benefits for vocational training? For completion of high school? For entry into college or graduate school? How many of the newly blinded are now remuneratively employed? How many continue to suffer serious psychosocial problems as a consequence of their disabilities? What might be done to help these men after they return to their communities?

1. R. G. Barker, et al., *Adjustment to Physical Handicap and Illness: A Survey of Physique and Disability* (revised edition; New York: Social Science Research Council, 1953), pp. 269-308.

Reference

Problems of the Elderly Receive Increased Attention

The intensive, nationwide activities of the last year or so in preparation for the White House Conference on Aging, to be held November 29-December 3 in Washington, D.C., have focused a great deal of attention on the problems faced by older Americans. This attention has already resulted in a number of proposals by the federal government that are aimed at improving services to the elderly and providing them with greater opportunities.

□ In July, the U.S. Social and Rehabilitation Service announced the approval of nine pilot projects in the Areawide Model Projects Program sponsored by the Administration on Aging. These projects, with a total first-year funding of \$2.2 million, will each attempt to develop a network of services to help meet the problems of older citizens within a specific area—a neighborhood, entire community, city, county, or group of counties—by providing an operational base to coordinate existing local services and by filling gaps through the development of new services.

Among the major problems to be attacked in the projects are the isolation of the elderly from community life and services, inadequate or

Areawide Model Projects Program

inaccessible social services, and unnecessary institutionalization stemming from a lack of alternative living arrangements or supportive in-home services. The projects, which will be operated either directly by the state agency on aging or through a contract arrangement with it, are in Maine, Mississippi, Nebraska, Oregon, Puerto Rico, South Carolina, Texas, Utah, and Virginia.

□ The first 11 projects in the Retired Senior Volunteer Program (RSVP) were approved June 30 by John B. Martin, commissioner on aging and special assistant to the President for aging. This program, authorized under Title VI of the Older Americans Act, will offer opportunities for older people to become active volunteers in hospitals, schools, day-care centers, courts, juvenile homes, Head Start, Red Cross programs, state parks, and libraries. Federal grants totaling \$495,050, to be used for reimbursing out-of-pocket expenses of the volunteers, were made to programs in Alabama, California, Kansas, New Hampshire, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, and Virginia. Matching or contributory funds will bring the total expenditure to \$612,049. The appropriation request for 1972 is \$5 million. On July 1, RSVP was transferred from the Administration on Aging to the new federal volunteer agency, ACTION.

Retired Senior Volunteer Program

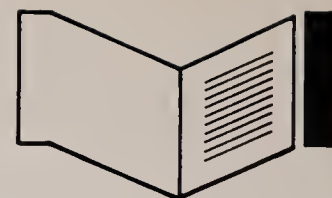
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1. Sales through dealers, carriers, etc.	0	0
2. Mail subscriptions	2681	2861
C. Total paid circulation	2681	2861
D. Free distribution by mail, carrier, or other means		
1. Samples, complimentary, and other free copies	229	215
2. Copies distributed to news agents, but not sold	0	0
E. Total distribution	2910	3076
F. Office use, leftover, unaccounted for, spoiled after printing	495	456
G. Total	3405	3532

I certify that the statements made by me above are correct and complete.

(Signed) Patricia Scherf Smith, Managing Editor



Visual Prosthesis: The Interdisciplinary Dialogue, edited by T. D. Sterling et al. Academic Press (111 Fifth Avenue, New York, New York 10003), 1971, xviii, 382 p. \$18.50. Proceedings of the Second Conference on Visual Prosthesis held at the Center for Continuing Education, The University of Chicago, June 2-4, 1969. Includes lengthy discussion sections as well as texts of papers delivered. A brief summary (pp. 345-69) is given of the First Conference held at MIT, Cambridge, Massachusetts, December 2-4, 1966.

Movement and Spatial Awareness in Blind Children and Youth, by Bryant J. Cratty. Charles C Thomas, Publisher (301-327 East Lawrence Avenue, Springfield, Illinois 62703), 1971, xv, 240 p. \$12.00. A textbook concerning the modification of perceptual and motor behavior of blind children and youth. Chapters deal with such aspects as body-image, manual abilities, spatial education, motor remediation, etc. Appendix I is "The Body-Image Screening Test for Blind Children," and Appendix II outlines the UCLA Mobility Test for the Blind.

The Heart Rate of Blind and Sighted Pedestrians on a Town Route, by R. J. Wycherley and B. H. Nicklin. *Ergonomics* (Taylor and Francis, Ltd., Red Lion Court, Fleet Street, London, E.C. 4, England), Vol. 13, No. 2, March 1970, pp. 181-92. Description of an experiment carried out as part of a mobility research project, the object being to devise methods of assessing the degree to which mobility devices help in reducing user stress.

Three Types of 'Maps' for Blind Travel, by J. A. Leonard and R. C. Newman. *Ergonomics* (see address above), Vol. 13, No. 2, March 1970, pp. 165-79. Report on a study of the problems of providing relevant information in non-visual modes to blind travelers.

Blindness, 1971, by American Association of Workers for the Blind, Inc. The Association (1511 K Street, N.W., Washington, D.C. 20005), 1971, 242p. \$3.00. The eighth issue of the annual published by the Association under a government grant. The useful listing of "U.S. Government Sponsored Research to Study Blindness" is once again supplemented. For the continuing series "Best of the Past for the Present," Dr. Berthold Lowenfeld has translated two excerpts from the works of Johann Wilhelm Klein, who played a decisive role in the education of the blind among the German-speaking people of Europe in the early 19th century.

—M. M. R.

Additional Listings

Studies in Continuing Education for Rehabilitation Counselors (SCERC), by Drs. Leonard A. Miller and C. Esco Oberman (both of the School of Education, University of Iowa). A series of 30 in-service learning units, on reel-to-reel or cassette tape recordings, available on loan from the Materials Development Center, Institute for Vocational Rehabilitation, Stout State University, Menomonie, Wisconsin 54751. A complete list of the subjects covered and full ordering information are available on request. The Center also publishes the **MDC Information Newsletter**, in which announcements of materials available to rehabilitation facilities and training programs are made.

Helping the Partially Seeing Child in the Regular Classroom. Pittsburgh Branch, Pennsylvania Association for the Blind (308 South Craig Street, Pittsburgh, Pennsylvania 15213), 1971, 15p. Free.

Proceedings of the National Training Institute on Special and Technical Secretarial Occupations for the Blind, Chicago, Illinois, May 19-22, 1971. Single copies available on request from Dr. Richard Kinney, Hadley School for the Blind, 700 Elm Street, Winnetka, Illinois 60093. A summary.

World Contact, a new bimonthly magazine for blind people, will begin publication this fall. The aims of the periodical are to promote original writing by blind men and women and to provide an international link for blind people throughout the English-speaking world. Braille and inkprint. International Publications for the Blind, 30 Baker Street, London, W.1, England.

Children of the Silent Night, a newsletter published in the interest of deaf-blind children by the Perkins School for the Blind (175 North Beacon Street, Watertown, Massachusetts 02172). Free.

Tactile Mobile Museum. A brochure describing a new program to provide special exhibits and elementary instruction in natural history for handicapped children. Mrs. J. Bert Dalton, c/o Natural History Museum, Box 1390, San Diego, California 92112.

A Manual of Simple Burial, by Ernest Morgan. Celo Press (Route 5, Burnsville, North Carolina 28714), fifth edition, 1971, 64p. \$1.00. This booklet, which is the standard reference work of the memorial society movement, includes a directory of eye-banks and comprehensive information about the bequeathal of eyes and other anatomical parts.



■ Through a cooperative effort on the part of the Virginia Commission for the Visually Handicapped and the Virginia Division of Motor Vehicles, blind and visually handicapped residents of Virginia are now able to receive a special identification card that is similar in appearance to a driver's license. The laminated plastic card, which includes a picture of the individual, a statement that the signer is legally blind, a physical description, and an ID number (in this case the individual's registry number as filed with the Commission), gives blind and visually handicapped individuals a standard and "official" form of identification for cashing checks and similar activities for which a driver's license is usually accepted. Applications for the cards are filed with the Commission, with the Division of Motor Vehicles arranging for the photograph and final issuing of the card.

■ A federal grant of \$1,897,000, awarded to the Cleveland Society for the Blind through the Ohio State Rehabilitation Services Commission, will be used, along with \$474,000 put up by the Society, for the construction of a Transitional Workshop and Work Activity Center addition to the agency's present Industrial and Food Service building. Training and work adjustment services for adult blind workers and specialized training for multiply handicapped people, none of which are widely available in the Cleveland area, will be provided by the new facility. This expansion project, scheduled for completion in late 1972, will also include the improvement of the existing facilities at the East 55th Street site.

■ Effective October 1, 1971, the address of the John Milton Society for the Blind is 366 Fifth Avenue, Room 503, New York, New York 10001.

■ The Jewish Guild for the Blind, in cooperation with Beth Israel Medical Center, both in New York City, conducted a four-week pilot project, which ended on July 2, to determine the possibility of training visually handicapped people for employment in hospitals. Eleven men and seven women, all classified as "legally blind," were assigned to training within various job classifications, including clerical, laundry, and kitchen service. The project coordinator was Mrs. Carmel Velli, supervisor of training and placement at the Guild; she was assisted by six other rehabilitation counselors.

Upon completion of the training period, a placement committee, formed by representative of the Jewish Guild for the Blind, the Industrial Home for the Blind (Brooklyn), and the New York Association for the Blind (New York City), began to assist the trainees in finding employment in various hospitals and other institutions, as well as in commercial laundries, restaurants, and luncheonettes.

■ Peter R. Muirhead, acting commissioner of the U.S. Office of Education, has added the National Accreditation Council for Agencies Serving the Blind and Visually Handicapped to the official USOE list of nationally recognized accrediting agencies and associations. This recognition, recommended by the Advisory Committee on Accreditation and Institutional Eligibility of the Office of Education, is the first to be given to an accrediting body covering primary and secondary schools in the field of special education (in this case, residential schools for the blind). Among the other organizations on the federal list are the American Bar Association, the American Public Health Association, the Council of Medical Education of the American Medical Association, the Council on Social Work Education, and the six regional accrediting bod-

ies in general education.

■ The Visual Science Information Center, a computer-based bibliographic service covering the world's literature on vision, has been established at the University of California, Berkeley. An author/subject printed index, *Vision Index*, is issued quarterly and contains approximately 2,500 individual citations (subscriptions: North America, \$20; other countries, \$21). For subscriptions to the index, demand search request forms, and further information, write to Harold R. Gibson, Director, Visual Science Information Center, University of California, Berkeley, California 94720.

■ Paul Knowles, 68, public relations representative of Leader Dogs for the Blind in Rochester, Michigan, died July 27 in Detroit. Blind from birth, Knowles attended the Georgia Academy for the Blind. After training in Battle Creek, Michigan, he worked as a physical therapist at the Warm Springs Foundation, including treatment of President Franklin D. Roosevelt. Knowles entered the field of public relations as a member of the staff of the American Foundation for the Blind and joined Leader Dogs for the Blind in 1948.

■ Based on studies conducted by Benjamin Wolf, regional consultant with the American Foundation for the Blind, and by Frank Kells on Project Sight Raising, the Phoenix Center for the Blind, Phoenix, Arizona, has resolved, through the action of its Board of Directors, to widen the scope of the agency's activities by initiating and maintaining a concentrated rehabilitation program for the blind. Among those areas to be included in the program will be personal and vocational counseling and training in mobility, communication, personal management, home-making, and social skills.

■ The top prize of \$500 in the first National Piano Competition for blind high school students was awarded to Valerie Wiener of Canoga Park, California, a senior at Birmingham High School, Van Nuys. Sponsored by the Louis Braille Foundation for Blind Musicians, New York City, the contest was held last spring and included a preliminary judging of tapes and performances by the five finalists in New York's Carnegie Recital Hall before a distinguished panel of judges.

The second prize of \$300 was awarded to Brenda Klaiman of Vineland, New Jersey, who attends the New York Institute for the Education of the Blind. The remaining finalists, Robert Ferri of Brooklyn, Steven Matzura of Hastings, New York (both of whom also attend the New York Institute), and Linda Kipps of Washington, D.C. (who attends the Maryland School for the Blind, Baltimore), each received proficiency awards of \$100.

The Louis Braille Foundation, a non-profit organization founded in 1951, assists blind musicians to obtain musical instruction, scholarships, and bookings and provides instruments, braille music, and special equipment. According to Miss Evelyn C. McKay, executive director of the Foundation, the contest was inspired by a desire to provide incentive and to stimulate interest in music among blind students as well as to discover new talent.

■ In July, the Division for the Blind and Physically Handicapped of the Library of Congress, Washington, D.C., formally opened a new recording studio to make it possible to record books or portions of books for student needs, foreign language books, and children's books and to cut master tapes for the cassette program, increasingly used by the young and mobile visually handicapped population.

With their own instruments and with the piano in the studio, blind and physically handicapped music students will be able to record auditions for submission to conservatories or music schools to which they are applying. Volunteer musicians in the Washington area will be able to

record music textbooks which contain music references. In addition to recording authors and other well-known figures who visit the Division's headquarters, the Library also plans to give leaders of groups of volunteer readers for the blind the experience of recording under professional studio conditions.

The recording studio was built with funds available from the John Knight Fund in the Library of Congress. John Knight, a noted violinist who was also a stage and radio actor for many years, was one of the first readers to participate in the talking book program when it was begun in 1934 at the American Foundation for the Blind, New York City. At his death in 1964, his will included a bequest to the Library of Congress for support of its activities to aid the blind.

■ Dr. Richard Kinney, executive vice-president of the Hadley School for the Blind, Winnetka, Illinois, and Mrs. Jean Ridenour, director of public relations at the school, recently completed a consultative mission to Madrid, Spain. The purpose of the trip was to assist in locating an estimated 250 deaf-blind persons in Spain who are unknown to the schools and agencies.

Working closely with officials of the Spanish National Organization for the Blind, Dr. Kinney became the first deaf-blind person interviewed for Spanish television. The Madrid press cooperated by featuring articles stressing the training that deaf-blind individuals can benefit from. Plans were also made to augment the rehabilitation material available in Spanish by translating Dr. Kinney's textbook *Independent Living Without Sight and Hearing*. It is hoped that these activities will encourage the family and friends of deaf-blind persons to take the initiative in securing help for them.

■ According to an item in the *IAB Bulletin*, published by the Iowa Association of the Blind, the Iowa Department of Public Safety has begun to add questions concerning the laws protecting blind pedestrians to its drivers license examinations.

■ H.R. 9102, a bill introduced in the U.S. Congress by Rep. John R. Rarick (D-La.), would require the embossing of braille markings on paper money to allow blind persons to identify the denominations by touch. The idea, claims Congressman Rarick, has already been instituted in the Netherlands.

Appointments

■ Indiana Vocational Rehabilitation Services Board, member: **Bashir A. Masoodi**, coordinator and resource instructor, Programs for Visually Impaired Students, Gary (Indiana) Public Schools.

■ National Eye Institute, Bethesda, Maryland: **Samuel Schwartz, Ph.D.**, deputy associate director for extramural programs and chief, Scientific Programs Branch.

■ American Foundation for the Blind, New York City: **Robert H. Carolan**, regional consultant for the northeastern states.

■ National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, New York City: **Douglas E. Inkster, Ed.D.**, assistant director.

■ Blinded Veterans Association, president (by election): **Robert C. Ward**, Seattle, Washington.

Awards

■ University of Nebraska, honorary Doctor of Humane Letters: **J. Kenneth Cozier**, Cleveland, vice-president, National Accreditation Council for Agencies Serving the Blind and Visually Handicapped, New York City.

■ Voyle C. Scurlock Award, National Rehabilitation Association Regional Meeting: **William V. Bridges**, former director of the Louisiana State Division for the Blind and Sight Conservation, Baton Rouge.

■ President's Award, Greater Pittsburgh Guild for the Blind: posthumously to the late **Rev. Thomas J. Carroll**, Newton, Massachusetts.

Coming Events

November 7-12 American Congress of Rehabilitation Medicine, 48th Annual Session, San Juan, Puerto Rico.

November 17-19 National Society for the Prevention of Blindness, Annual Conference, New York City.

November 17-20 American Speech and Hearing Association, 47th Annual Convention, Chicago.

November 29-December 3 White House Conference on Aging, Washington, D.C.

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

1972

February 27-March 3 Society of Contemporary Ophthalmology, Winter Meeting, Hollywood, Florida.

March 19-25 Council for Exceptional Children, 50th Annual International Convention, Washington, D.C.

April 2-7 Ninth Pan American Congress of Ophthalmology, Houston.

April 5-6 American Geriatrics Society, Annual Meeting, New York City.

April 5-8 American Orthopsychiatric Association, 49th Annual Meeting, Detroit.

April 17-21 European Society of Ophthalmology, Fourth Congress, Budapest, Hungary.

April 24-28 Association for Research in Vision and Ophthalmology, Spring Meeting, Sarasota, Florida.

May 14-20 National Conference on Social Welfare, 99th Annual Forum, Anaheim, California.

May 15-19 National Braille Association, 12th National Conference (place undecided).

June 4-8 Special Libraries Association, Boston.

June 25-29 Association for Education of the Visually Handicapped, 51st Biennial Conference, Miami Beach.

July 2-7 International Association of Gerontology, Ninth International Congress, Kiev, U.S.S.R.

July 26-August 2 International Council of Educators of Blind Youth, Fifth Quinquennial Conference, Madrid, Spain.

August 13-19 International Council on Social Welfare, 16th International Conference, The Hague, Netherlands.

August 27-September 1 International Society for Rehabilitation of the Disabled, 12th World Congress, Sydney, Australia.

September 11-13 Gerontology Around the World, 25th Annual Conference on Aging, University of Michigan, Ann Arbor.

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This year the Library of Congress Division for the Blind and Physically Handicapped has used over 1 million Evatone Soundsheets. This is the fourth year that soundsheet inserts are being used in Talking Book Topics, and now US NEWS AND WORLD REPORT publishes its magazine weekly on Evatone Soundsheets. They record two hours of news on each soundsheet which is played at the 8 rpm speed.

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There have been a variety of different uses of Soundsheets for blind and physically handicapped people. Last year the State of Illinois used Evatone Soundsheets to inform blind people of the proposed changes in their state constitutions. In other states rehabilitation agencies are using Evatone Soundsheets for bulletins and newsletters. Publishers,

educators and advertisers have successfully used Evatone Soundsheets for almost 10 years.

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Sensi-Quik canes are provided on a non-profit, service basis to agencies and individuals on payment of a fee of six dollars. Our booklet, "Touch and an Occasional Tap," is furnished without extra cost in the following formats: disc, tape, braille, or inkprint. Persons or agencies interested in the Sensi-Quik cane are invited to contact

The Go-Sees, 166 East 92nd Street, New York, New York 10028

THE NEW Outlook FOR THE BLIND

December 1971 Volume 65 Number 10

Articles

- 313 Tutoring a Visually Handicapped Student
 in High School Chemistry
 Abraham S. Kaufman
- 318 A Study of Sex Education Programs
 for Visually Handicapped Persons
 Frederick E. Bidgood, M.A.
- 324 The Binaural Sensor as a Mobility Aid
 Walter Thornton, M.R.S.T., B.A.
- 327 The Fiftieth Anniversary Celebration
 of the American Foundation for the Blind
- 331 "Total Life" Rehabilitation for the Mentally
 Retarded Blind Person
 Benjamin C. Johnston, M.Ed.
- 334 Visual Impairment Is Not Blindness
 Benjamin Wolf, M.S.S.A.
- 337 A Comparison of Teachers' Attitudes Toward
 Blindness and Exposure to Blind Children
 Judith Kuhn

Departments

- 341 Current Literature
 Mary Maie Richardson
- 341 News in Brief

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Tutoring a Visually Handicapped Student in High School Chemistry

The goal of teaching chemistry and the physical sciences to high school students is to enhance their understanding and appreciation of the basic concepts of matter and energy. Most of these concepts are taught through the use of both theoretical and physical models. In helping the visually handicapped student to understand these basic scientific concepts, however, it is often necessary to make certain adaptations in the physical models to insure that the student can comprehend them fully and accurately.

□ Unfortunately, there is little in the literature to help the teacher who is called upon to assist a visually handicapped student and who is not trained as a special education teacher. Consultation with agencies for the blind and discussion with other chemistry teachers are often of very little value. The equipment that is available is very limited: a ruler using the English system, a Fahrenheit thermometer, a meter with raised markings, and little else. There is apparently no reasonably complete catalogue of adapted or specially designed science teaching materials and no central clearing house which might provide ideas and suggestions for adaptations. An investigation of the catalogues of the several companies manufacturing science teaching materials reveals that only a few standard items would be of real use and that they are usually prohibitively expensive for a one-to-one tutoring situation. The following descriptions of improvised materials and techniques, which I developed during the 1970-71 school year, are offered to other teachers who face similar problems in teaching chemistry to visually handicapped students and to those who provide science teaching materials with the hope that they may be of use and may inspire the development of other similar materials.

The scientific method of indirect observation can be taught through the use of the closed box, an exercise described in the CEMS Manual.¹ The student must try to determine what the internal structure and contents of a closed box might conceivably be. By the use of probing questions, the student can be led to use not only his senses of touch and hearing but also such devices as magnets in his investigation. He is encouraged to reach tentative conclusions based on *all* of his observations rather than on each individual one. The fallacious reasoning in the story of the blind men and the elephant can be easily brought out.²

□ The author gratefully acknowledges the invaluable assistance of Mrs. Zita Auerbach, an itinerant teacher of the visually handicapped with the Board of Cooperative Educational Services, Nassau County, New York, in the efforts described in this paper.

ABRAHAM S. KAUFMAN

Mr. Kaufman is a science teacher in Freeport, New York.

Lack of Developed Materials Leads to Improvisations

Teaching indirect observation

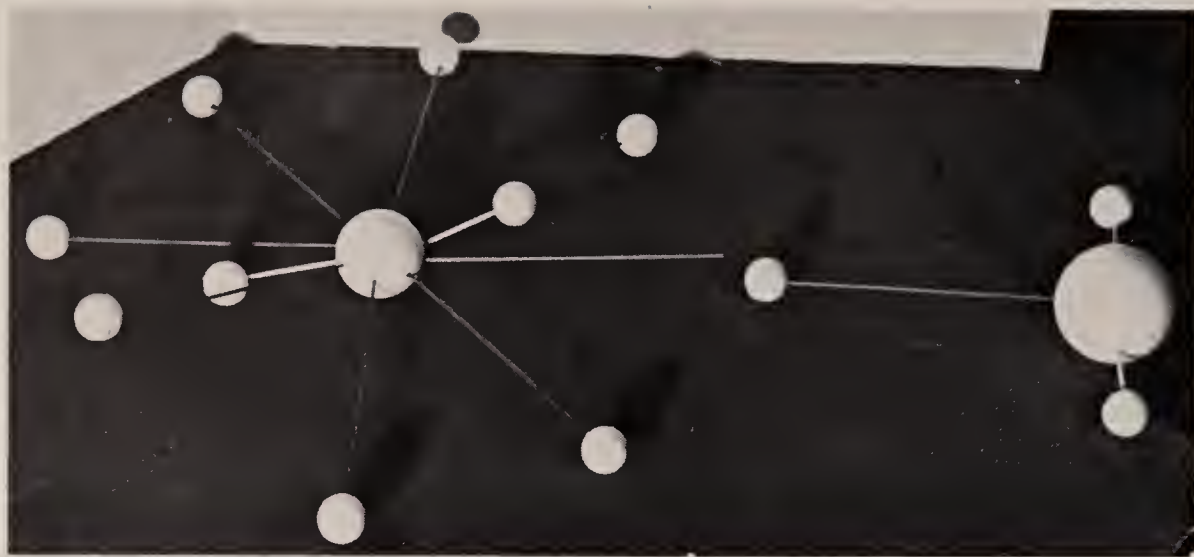


FIGURE 1
"Rod" Models of Lithium and
Fluorine Atoms

□ Standard models for teaching about the structure of the atom, such as the Welch three-dimensional model showing the nucleus and the rotation of electrons in different orbits around it, are usually not satisfactory. While the sighted student can ignore the rods which hold the outer shells to the gearing mechanism, these can be confusing for the blind student. A static model, using styrofoam balls, is much more useful (see Figure 1). The model consists of a large ball, representing the nucleus, and 1½-inch rods extending to the first (K) shell with small balls representing its two electrons and 6-inch rods extending to the second (L) shell with its electrons. The rods, whose length indicate the distance from the nucleus and locate the shell, are added to the model as the discussion of the different elements proceeds. These can be inserted in any plane, so the three-dimensional aspect of atomic structure can be impressed on the student. No more than the first two shells of electrons can be practically demonstrated (the rods for the M shell would be rather long), but it was found that such elaboration is not necessary. The concept of an electron cloud can be explained by not inserting the rods to an exact length and explaining that the region in which an electron travels is not a single line, but rather a wide path (much as in baseball, where the base path from first to second base is also not a single line, but a wide path).

Models Illustrating Atomic Structure

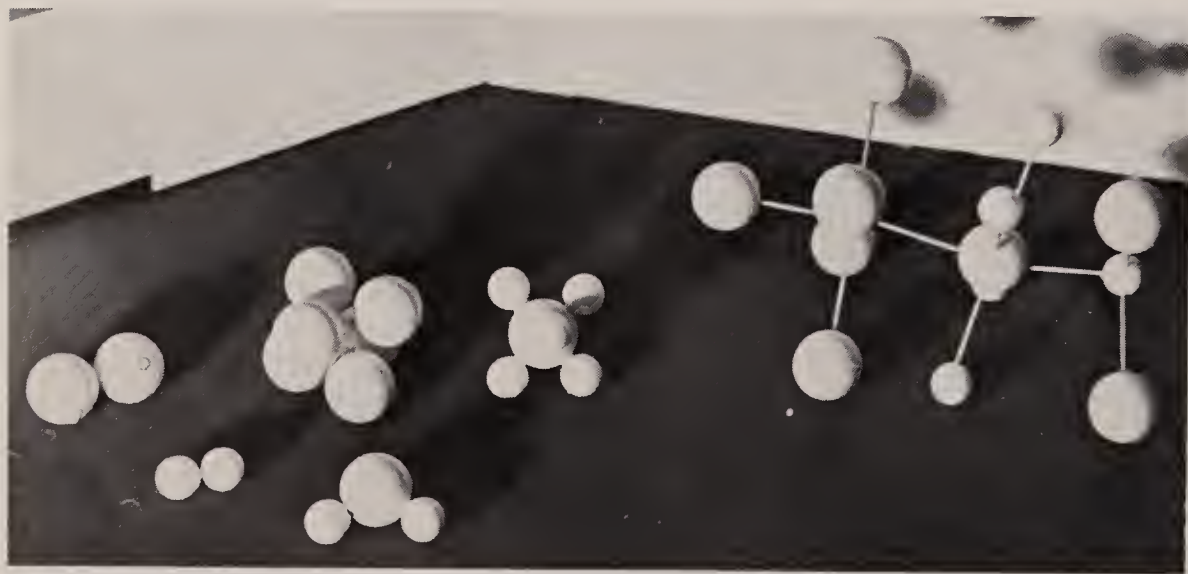


FIGURE 2
"Ball" Models for Illustrating
Molecular Structure

In representing the atomic structure of the various elements, it is a good idea to use the same size balls for the various particles and to be consistent in the relative sizes of the atoms. The models can then be used in later lessons. For example, models for the seven gases which are found as diatomic molecules can be set up and kept for the study of chemical reactions in which the gas, as one reactant, combines with another substance and separates to form a new product (examples of such models are illustrated in Figure 2).

The periodic table of elements provides an extremely valuable model for setting forth the principles of elementary chemical combinations. Although these principles can be taught to the student through recitation, a much better foundation can be laid through the arrangement of the periodic chart itself. The only table of elements available in braille is a line-by-line listing of the names, symbols, atomic numbers and weights, and electron structures, but with no indication of the relationships of the elements to each other as is so beautifully done in the periodic chart. My first attempt at putting the brailled descriptions of each element into the arrangement of the periodic was rather crude but, nevertheless, quite successful. I used two 16-by-20-inch illustration boards (heavy cardboard) with the descriptions of the first 20 elements (brailled on individual cards by the student) arranged appropriately and separated by half-inch strips of oak tag. The braille teacher marked the meaning of the various words and numbers above the braille cells (see Figure 3). As the student progresses, he gradually learns the many things that the arrangement of the chart indicates: groups or families of elements, periods, electron structure, electron transfer, ionic bonding, and atomic radii. Homework assignments include work requiring the use of the chart. It is clear, however, that many improvements in the chart are possible: narrower separators, more information about each element, and typing and brailleing of the cards by a professional typist-brailist. A colleague has suggested that the information about each element also be brailled on cards the size of ordinary playing cards and used as "flash" cards or in various other drills between teacher and student.

A part of the study of ionization is differentiating between solutions which will and will not conduct an electrical current. The normal procedure for testing the conductivity of a solution is to place two electrodes in it; if the solution is a good electrolyte, the circuit is completed and a light bulb will be brightly lit. Likewise, a weak electrolyte is indicated by a dimly lit bulb and a non-electrolyte by an incomplete circuit and no lighting of the bulb. It is a simple procedure to substitute a buzzer or bell system for the light bulb, as is shown in Figure 4. (It is a good idea to insulate—the 110-volt input to the transformer at the primary in order to eliminate any possible danger of shock. The voltage output at the secondary is only 10 volts, which is not especially hazardous.) Taste and smell can also be used in determining whether a solution is an electrolyte or a non-electrolyte. Salt water, a good electrolyte, can be identified by taste, as can sugar water, a non-electrolyte.

FIGURE 3
One Box From the Brailled Periodic Table of Elements

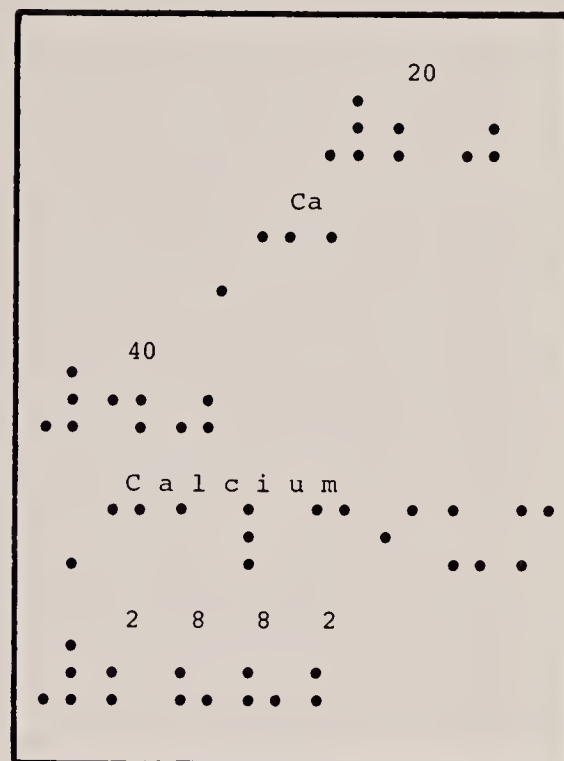
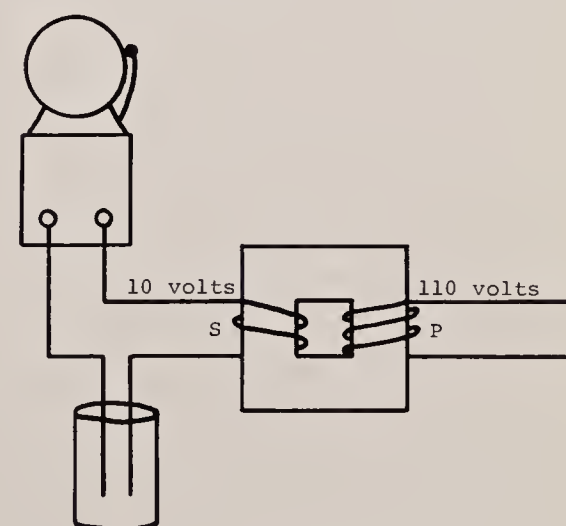


FIGURE 4
Conductivity Indicator Showing the Use of a Standard Bell Transformer



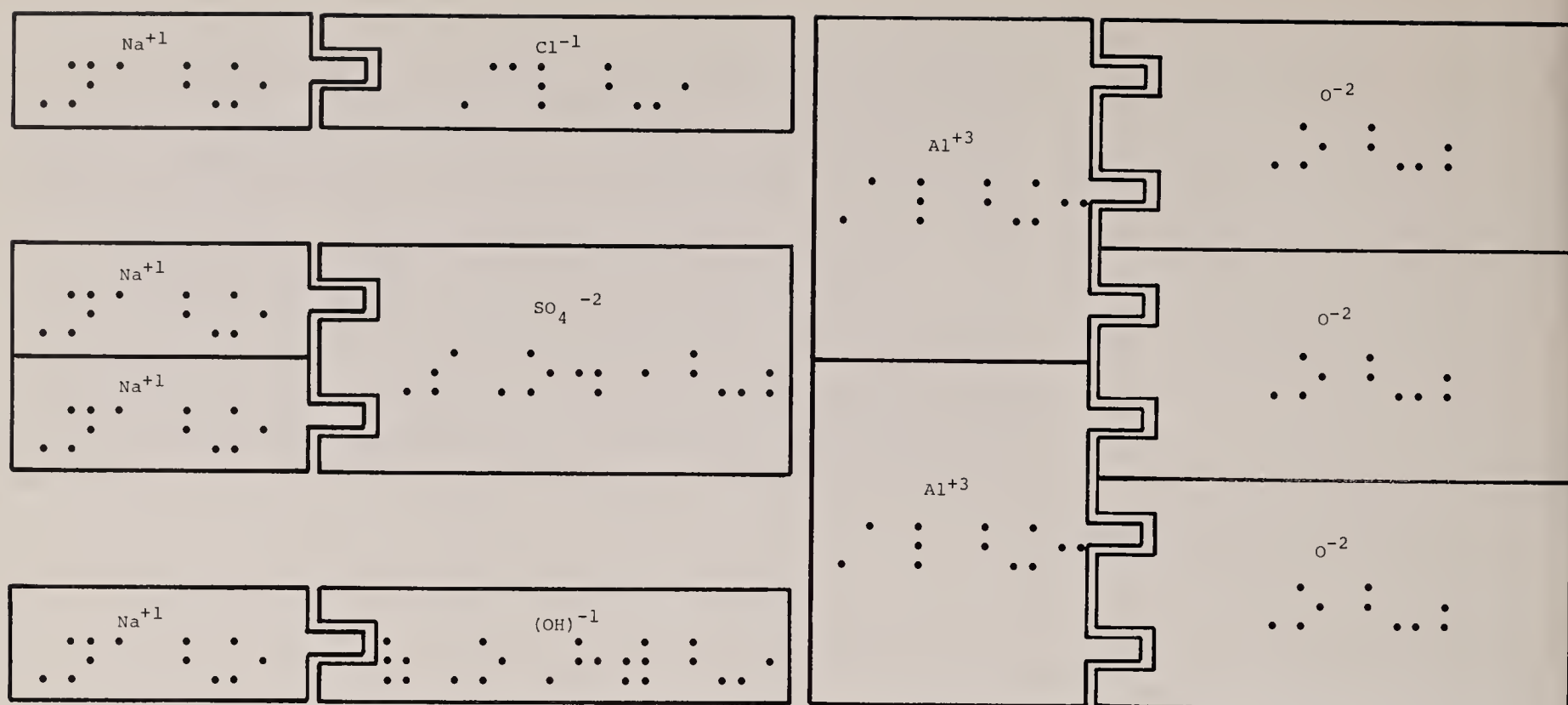


FIGURE 5
Aids Used in Teaching the
Interaction of Ions and Radicals

Alcohol, also a non-electrolyte, can be identified by smell. Each of these can also, of course, be tested with the bell or buzzer conductivity indicator. The differences in the conductivity of concentrated and dilute acids can be shown by placing the electrodes in glacial acetic acid, for example, and adding water until the dilution causes a change in the sound of the indicator.

□ There is usually great difficulty in conveying, even to sighted students, the idea of charged particles and their role in chemical reactions as expressed by formulas and equations. To aid the learning of this idea, therefore, small rectangular pieces of 1/8th-inch Masonite or heavy cardboard are cut and identified with braille and print tags indicating the ion or radical and its charge. Those with plus charges have small projections cut in them, while those with minus charges have matching indentations. As shown in Figure 5, the formulas for simple compounds (such as NaCl) as well as for more complicated ones can be shown easily and quite graphically. Because the various chemical components can be shifted around, even relatively complex chemical reactions can be demonstrated and the balancing of equations used to illustrate the Law of the Conservation of Matter (see Figure 6). This material is also useful in teaching sighted students who have difficulty in grasping the concepts of ions, radicals, formulas, and balancing equations.

□ After my experience in resolving—often after much frustration—the many difficulties that face anyone in the public schools who is called upon to teach chemistry and physical science to a visually handicapped student, I can only say that there is clearly a need for more involvement in this area by those engaged in improving the delivery of services to blind persons. Since originally writing this paper, I attended the 1971 convention of the National Science Teachers Association

The Principles of Chemical Reactions

Conclusions

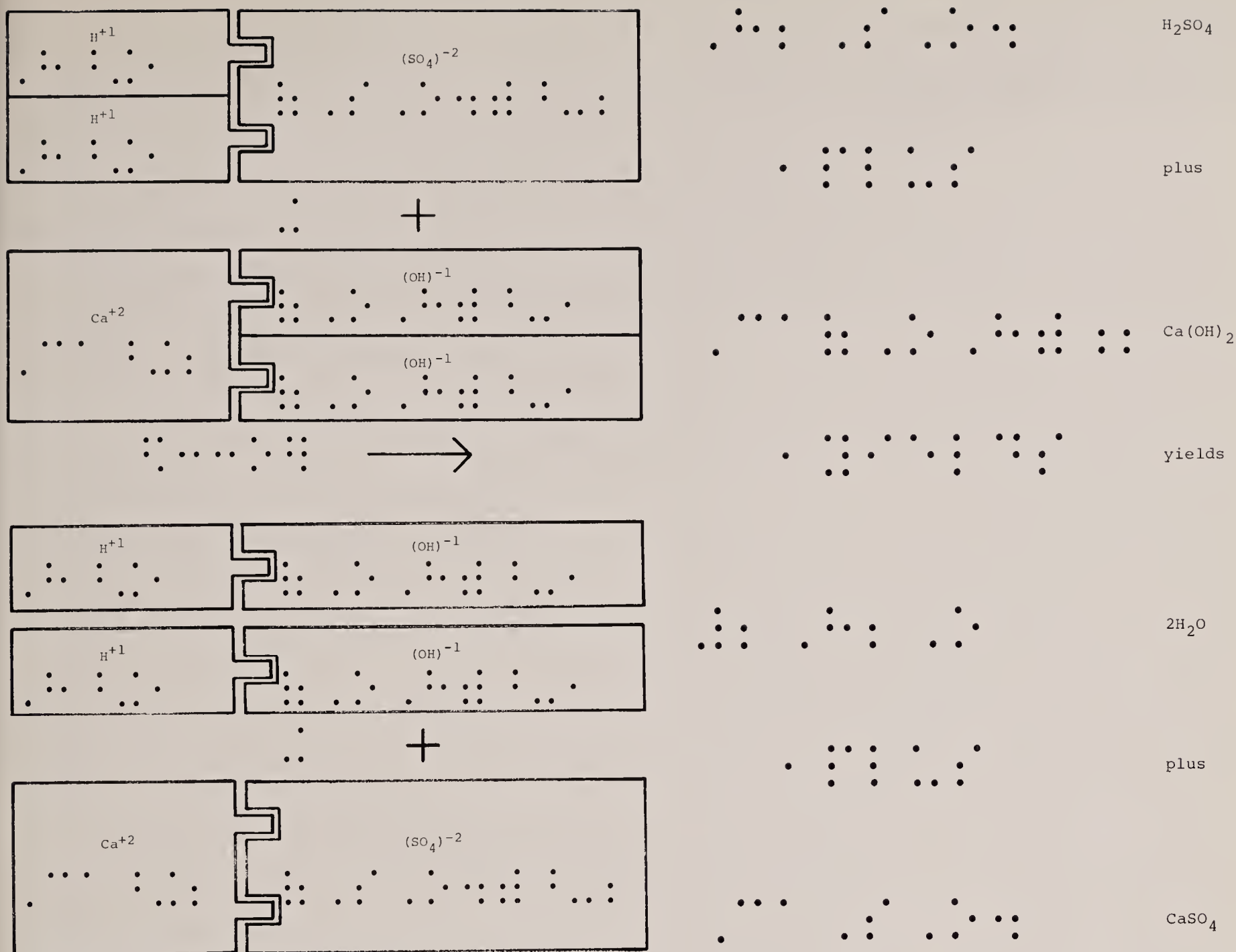


FIGURE 6
Aids Used in Demonstrating the
Balancing of Equations

and learned there of the very significant work being done by Dr. Herbert D. Thier and the Adapting Science Materials for the Blind project (see *New Outlook for the Blind*, June 1971, pp. 190-94). This effort, which adapts materials produced by the Science Curriculum Improvement Study (a National Science Foundation project), should be taken up by other groups as well. The results could then be fed into a central agency so that all involved could share their findings and so that much unnecessary frustration and duplication in the field could be eliminated.

1. McClellan, A. L., ed. *Teacher's guide for Chemistry: An Experimental Science*, edited by George C. Pimental. San Francisco: W. H. Freeman, 1963. See pp. 437, 441-42.
2. Goldstein, Philip. *How to Do An Experiment*. New York: Harcourt, Brace, 1957. "The Blind Men and the Elephant" by John Godfrey Saxe (1816-1887) is quoted on pp. 31-32.

References

A Study of Sex Education Programs for Visually Handicapped Persons

With the increasingly open and honest approach toward sex in our society, many churches, schools, and other organizations have come to recognize the importance of family life/sex education, and are providing materials and programs in sex education to the individuals they serve. Working under a grant from the General Service Foundation, St. Paul, Minnesota, the American Foundation for the Blind (AFB) and the Sex Information and Education Council of the U.S. (SIECUS) are cooperating in a joint project to produce a resource guide as a stimulus to development of programs and materials in sex education for visually handicapped persons.

□ As an initial step, SIECUS, a non-profit, voluntary health organization whose stated purpose is "to establish man's sexuality as a health entity," undertook a survey of existing programs in sex education available to visually handicapped individuals. The purpose of the survey was to investigate the extent and nature of these programs, the use of any special materials or facilities, and the willingness of institutions and organizations serving visually handicapped persons to become involved in the development of new programs and materials. There was no attempt to evaluate individual programs or their effectiveness.

Three populations were identified for study: public schools, residential schools for the blind, and multi-service agencies meeting the special needs of the visually handicapped. It is estimated that 60 percent of school-aged visually handicapped children attend public schools and that about 40 percent are in a residential school setting. Multi-service agencies deal with visually handicapped clients of all ages and their families, providing various types of educational, counseling, and social service programs. All public school systems included in the sample were known to provide educational services to visually handicapped students. The multi-service agencies selected for study were known to deal with large numbers of visually handicapped clients and to provide a variety of special services to meet their needs. All residential schools for the blind in the United States were included.

A short survey instrument was constructed for each identified population. The questionnaire asked respondents: 1) if their school/agency felt a responsibility to provide sex education programs to visually handicapped individuals; 2) if a sex education program was offered, under development, or projected; 3) what kind of program was offered, if any; 4) to what age/grade levels it was offered; 5) what the general content of the program was; 6) what special materials or facilities were available for visually handicapped students; 7) if their school/agency was willing

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Purpose of the Survey

Populations surveyed

Survey instrument

to be involved in field testing the proposed "Resource Guide in Sex Education for the Visually Handicapped." The questionnaires were sent to the superintendents of 144 public school systems and 51 residential schools for the blind, and to the directors of 78 multi-service agencies.

□ Of the 273 institutions and organizations contacted, 118 (43.2 percent)—44 public school systems (30.6 percent), 32 residential schools (62.7 percent), and 42 agencies (53.8 percent)—from 39 states and the District of Columbia replied to the questionnaire. The public schools were primarily urban, although several county-wide school systems also responded. Twenty-five of the 32 residential schools for the blind responding were state schools and seven were privately operated. All but one of the 42 multi-service agencies were private organizations, the remaining one being church-related.

The majority of the respondents (88.1 percent) indicated that sex education was seen as a responsibility of their schools/agencies (see Table 1). Although almost one in four of the agencies and one in eight of the residential schools felt no responsibility to provide a sex education program for the visually handicapped, only one of the 44 public school systems responding did not feel this responsibility, and it is located in a state which, by law, prohibits sex education in the public schools. Many respondents commented that the primary responsibility for providing

Results

Responsibility for sex education

Response	Public Schools		Residential Schools		Agencies		Total	
	#	%	#	%	#	%	#	%
Yes	43	97.7	28	87.5	33	78.6	104	88.1
No	1	2.3	4	12.5	9	21.4	14	11.9
Totals	44	100.0	32	100.0	42	100.0	118	100.0

TABLE 1
Acceptance of Responsibility to Provide Sex Education Programs to Visually Handicapped Persons

sex education to visually handicapped individuals (as well as all other persons) lay with their parents and churches, but that since these groups had not fulfilled their responsibilities, the schools and agencies had to accept it. Respondents from several residential schools and agencies indicated that their students or clients were multiply handicapped and too severely impaired to be provided with little more than custodial care; therefore, no responsibility to offer any kind of sex education was felt.

Fewer agencies (47.6 percent) than public schools (61.4 percent) and residential schools (78.1 percent) stated that they currently offered some form of sex education program to visually handicapped individuals, but more agencies were considering or developing such programs (see Table 2). In all, 78.0 percent of the respondents (77.3 percent of the public schools, 87.4 percent of the residential schools, and 71.4 percent of the multi-service agencies) either claim to have or to be developing or considering some form of sex education program for the visually handicapped. Several of the public school systems which feel a responsibility to

Programs being considered or developed

Status	Public Schools		Residential Schools		Agencies		Total	
	#	%	#	%	#	%	#	%
Have a program	27	61.4	25	78.1	20	47.6	72	61.0
Program under development or consideration	7	15.9	3	9.3	10	23.8	20	17.0
No program under development or consideration	10	22.7	4	12.6	12	28.6	26	22.0
Totals	44	100.0	32	100.0	42	100.0	118	100.0

TABLE 2
Status of Sex Education Programs
by Population

provide a sex education program but are neither offering nor developing one, indicated that community pressures will not allow the introduction of sex education into the curriculum.

□ The vast majority of respondents offering a sex education program to the visually handicapped (90.3 percent) integrated it into their existing, on-going educational and counseling services. In public and residential schools the material was covered in a variety of classes, with health, biology, home economics, and physical education being most frequently mentioned. The agencies included sex education materials and information in their regular counseling and social services to both their visually handicapped clients and their families. More residential schools (24.0 percent) than agencies (20.0 percent) and public schools (3.7 percent) had a special course or class in sex education, and 18 respondents (25.0 percent) indicated that their sex education information was given on an informal basis as the occasion arose. One of the public school systems used special caseworkers to discuss sex information, and one had a special movie program sponsored by the PTA. Several of the residential schools used out-of-class time to provide sex education programs in the cottage or dormitory setting, in on-campus religious groups, and in special workshops. One agency used the local chapter of Planned Parenthood, and others offered programs to parents' groups, in their work-study programs, and as part of their summer camp programs for teens and adults.

Sixteen of the 27 public school systems with sex education programs (59.2 percent) had kindergarten through twelfth grade (K-12) curricula, and nine (33.3 percent) offered their programs only at the junior high-senior high level. None restricted their sex education program to the senior high level. The residential schools were more restrictive, with seven schools (28.0 percent) offering sex education at the senior high level only, and three additional schools (12.0 percent) at the upper elementary and twelfth grade only. Eleven residential schools (44.0 percent) offered a K-12 curriculum, and one school was ungraded, with ages ranging from 6 to 21 years. The multi-service agencies having programs

Kinds of Instruction Offered

Ages of students

in sex education for their visually handicapped clients emphasize the older age groups. Seventeen agencies (85.0 percent) offer programs to parents or adult visually handicapped, and 14 (70.0 percent) to those in their late teens and to young adults. Only seven agencies (35.0 percent) have sex education programs for the junior high age-level, and only six (30.0 percent) for the elementary age group.

□ Sixty-one respondents (51.7 percent) indicated a willingness to become involved in the AFB-SIECUS project to develop a resource guide, 33 (27.9 percent) refused, and 24 (20.4 percent) were undecided. Seven of the eight agencies unwilling to participate were totally negative about accepting sex education as part of their function, and one gave no reason. Of the nine residential schools unwilling to participate, four were negative toward sex education, three indicated that their students were multiply handicapped and too severely impaired to allow participation, and two cited no reasons. Those public schools unwilling to participate gave the following reasons: there are too few visually handicapped students in attendance to make participation feasible (four schools); there is a well-developed curriculum already in use (three schools); one or more itinerant teachers serve several different schools, so participation is not feasible (three schools); public disapproval prevents establishing any kind of sex education program (two schools); and sex education is illegal in the public schools (one school). Almost all of those undecided wished to have their own curriculum specialists review the project materials prior to deciding whether or not to participate in field testing.

Respondents were asked to describe briefly the content and purposes of their sex education programs, and to indicate any special materials or facilities used with visually handicapped persons. Most of those respondents commenting on the purposes of their program indicated that it was designed primarily to teach body image, hygiene, and the elements of reproductive biology. A few, particularly among the public schools, went beyond this to “develop a positive and wholesome attitude toward sex” and to “teach the physical, psychological, and social aspects of human relationships.”

While some of the public school respondents indicated that they provided resource rooms, itinerant teachers, braille and audio materials (some locally produced), and models, most public schools simply included their visually handicapped students in their regular classes with no special facilities or materials. Several comments indicated that since the sex education materials in use were so heavily visually oriented, many of their visually handicapped students were having a difficult time understanding the basic concepts and learning details.

The comments of respondents from the residential schools indicated that although they were better equipped than the public schools to deal with the problems involved in teaching those with visual disabilities, their sex education curricula were generally less well-developed. They make use of a large number of teaching aids, including commercially produced tapes and records, many locally produced braille and large-print books

Willingness to Participate in AFB-SIECUS Project

Content and purpose of existing programs

Public school programs

Residential school programs

and tapes, the realistic "Baby Brother" and "Baby Sister" dolls, and other models.

With the exception of those multi-service agencies which have formal sex education programs in camps, workshops, and parents' groups, most agency programs are included in individual counseling services. Many of the teaching aids mentioned above are used. As a method of developing a sense of body image, one agency allows younger children to bathe and dress together, and older children to care for the younger ones. Several agencies and residential schools provide settings for dances and other "contact" social events to build body image and to assist in general social development.

Several respondents commented that currently available teaching aids are inadequate: models do not feel like flesh; braille diagrams are complicated and difficult to understand; some of the best books for children and young adults are neither in braille nor on tape or record.

□ Although many respondents feel that the primary responsibility for providing sex education lies with the home, a large majority of these schools and agencies now see sex education as part of their educational counseling responsibilities, and a large percentage are acting upon this sense of responsibility by offering programs in sex education to their visually handicapped students and clients. Because the topic of sex education is still a fairly sensitive one in much of our society, it can be argued that the schools and agencies which responded to the survey may have done so because they are generally in favor of sex education, while those which did not respond are generally opposed to, or not interested in, sex education. If this were so, it would follow that the sample is biased.

However, if all those institutions and organizations which did not return the questionnaires had responded in a totally negative fashion, over one-quarter of the total (26.4 percent) would still offer some form of sex education program, and slightly more than one-third (33.7 percent) would either have or be developing or considering such a program. Even if this were the case, these figures are large enough to justify the conclusion that a significant number of schools and agencies are realizing that visually handicapped persons have been "short-changed" with regard to sex education, and that moves are being made to correct this situation. This is not to say that the problem is well on the way toward being solved. Stating a feeling of responsibility and claiming to offer some kind of "program in sex education" does not mean that the program is either comprehensive or effective.

□ This study did not attempt any in-depth evaluation of the currently available programs in sex education, but sought some sense of the goals and content, materials and special facilities in use. Although the respondents' descriptions and comments were too brief and fragmented to give a complete picture of their programs, the following tentative patterns were seen:

1. The public school programs appear to be the best planned and most heavily developed in content, but since they are designed for sighted

Agency programs

Inadequate teaching aids

Discussion of Survey Results

Interest in sex education

Patterns of Current Sex Education Programs

children, using mainly visually-oriented teaching aids, and since most make no special materials available to their visually handicapped students, many of their visually handicapped students have difficulty grasping the concepts presented.

2. The residential schools appear to be best equipped in both materials and facilities to deal with the learning difficulties of the visually handicapped child, but since a number of residential schools have only recently begun their programs in sex education, many of these programs seem in need of further planning and development.

3. The multi-service agencies appear to be generally content to treat sex education as a part of their counseling services on an individual basis, although a few agencies are seizing the opportunity to provide organized sex education programs for parents, or in the summer camp or workshop setting.

□ The vast majority of public and residential schools feel a responsibility to provide sex education for their visually handicapped students, and although less so, the feeling is also strong in agencies dealing with the blind. The majority offer some kind of sex education program, but many of these programs need further development. In general, the public school programs seem more thorough and better planned than those of the residential schools or agencies. There is a recognized need to provide good sex education programs, but a lack of good audio and tactual teaching aids, among other things, is blocking progress. The schools and agencies see the problem and are seeking solutions.

Summary

Project: Banking and the Blind

A new program called PROJECT: Banking and the Blind was recently launched in Ontario, California, and Washington, D.C. Sponsored by the American Bankers Association, the program is geared to help blind and physically handicapped individuals to handle their financial problems. Braille and talking book editions of *Personal Money Management*, a booklet on financial planning, are now available from ABA member banks across the country.

As a part of the nation-wide kick-off of the program, Clifford C. Sommer, president of the American Bankers Association, presented a copy of each edition to Tim Burdick, the blind Ontario high school sophomore who first brought the special needs of blind persons for financial planning information to the attention of the ABA. Willis

(Continued on page 340.)

The Binaural Sensor as a Mobility Aid

The attempt to use electronics in solving the problems of mobility for blind persons is nearly as old as the industry itself. This immediacy is in most striking contrast to the centuries which elapsed between the conception of the idea of using the dog or the cane as mobility aids and the development of effective systems based on their use. The contrast is also highlighted by the readiness with which blind and sighted persons alike have accepted the view that electronics can aid mobility, an acceptance which has been reflected in the prompt flow of volunteers willing to try the various devices which have already appeared. The progress made to date warrants the hope that a near-complete solution may ultimately be found, although this seems likely to be a generation of two away. In immediate terms, however, the production of the binaural sensor by a team led by Professor Leslie Kay of the University of Canterbury, New Zealand, represents, in the writer's view, a development as significant as the evolution of the mobility systems based on the use of the dog or the long cane.

□ This view is based on regular use of the binaural sensor, in conjunction with the long cane, for an average of two hours daily through the past nine months, under widely varying conditions in several countries. During that time, it is estimated that a distance of approximately 1,250 miles was walked, much of it over entirely unfamiliar terrain and almost all of it with an absolute minimum of sighted assistance. The author's opinion is reinforced by brief experience with other electronic mobility aids, including a light device reflected into a photo-electric cell; the laser cane; the Russell pathfinder; the Opticon; and the Mowatt electronic cane, and by conversations with other users of the binaural sensor in New Zealand and Australia. Successful courses of instruction in the use of the device have been instituted in New Zealand and Australia. There is currently an arrangement for a major evaluation by about 250 blind users, principally in the United States, but also in Britain, New Zealand, and Australia, and for the establishment of courses for binaural sensor instructors at Boston College in Massachusetts, at the University of Western Michigan, Kalamazoo, and probably at the National Mobility Centre in the United Kingdom.

The binaural sensor is a transistorized transmitter-receiver whose waves of ultrasonic energy are reflected back by objects in their path, the reflections being converted into audible signals in a manner which matches the natural hearing of the user. The signals are fed simultaneously into both ears through carefully fitted, flesh-colored ear molds, which also permit the unimpeded passage of ambient sounds.

WALTER THORNTON, M.R.S.T., B.A.

Mr. Thornton is chairman of the Advisory Committee, National Mobility Centre in the United Kingdom and founder-chairman of the Mobility of the Blind Association.

Experience With the Binaural Sensor

Description of the aid

Neat and compact, the whole device weighs just under 15 ounces, which includes a four-ounce, rechargeable 12-volt battery. The aid has three parts: the spectacle frame, the lead, and the control box. The spectacle frame is surprisingly light, lighter than many pairs of ordinary spectacles, and its only unusual feature is the three circles of stainless steel gauze, each half an inch in diameter, which are mounted in the bridge. These protect the one transmitting and two receiving transducers. The lead houses the microcables which connect the spectacle frame with the control box, the latter containing the circuitry, two control switches, and a volume control knob. The mean transmission frequency is 67.5 kilohertz. Under most circumstances, signals are reflected back from a distance of approximately 12 feet, within a field of view of about 60 degrees.

The writer's assessment of the binaural sensor is that of the first practised exponent of the long cane system to be trained in its use as a supplement to the long cane. The training, which took place in New Zealand, totalled 25 hours spread over two and a half weeks. The first walk under uncontrolled conditions in a residential and shopping area occurred after seven hours of training. Exposure to the most congested condition of peak-period downtown Auckland took place after 14 hours of training. Personal preparation prior to training took the form of careful long cane practice; wearing sunglasses for several hours a day for some weeks prior to commencing training; and playing through St. Dunstan's instructional tapes for the sonic aid, a predecessor of the binaural sensor and a device with which the writer was quite familiar.

Since the completion of training, the objective has been to acquire a competent technique incorporating the most advantageous features of the long cane and of the binaural sensor. The personal advantages which have resulted are a lessening of strain; a sense of greater protection; increased orientation capacity; greater awareness of the surroundings; and enhanced motivation to explore unfamiliar areas and to visualize the surroundings. These advantages support the view that the binaural sensor, when used in conjunction with the long cane, is a most valuable mobility aid, one which is capable of extending the mobility potential of either the experienced or the inexperienced blind traveler.

□ For indicating a clear path and for locating certain specific orientation points, the binaural sensor is easy to learn and easy to use. This is so because localization of the objects indicated by the reflected signals occurs in much the same natural way as that in which the sources of ambient sounds are perceived. The source of the signal indicates the position of the reflecting object, the display being presented stereophonically along the azimuth. The pitch of the signal indicates the distance of the reflecting object and, while subtle differentiations may be difficult or even impossible for some, the "close-at-hand" or "stop" signal is unmistakable.

The use of the sensor can be illustrated with a simple example. As the user of the device moves along a sidewalk, recurring signals indicate the



Advantages

Using the Binaural Sensor

Examples of use

building line on his right; a traffic sign at the edge of the sidewalk comes in from about 12 feet ahead on his left; the passer-by, cutting across his path from right to left, is also indicated in that direction. This greatly simplifies the process of locating things in the environment and makes the process a natural one. It is, of course, necessary to acquire a combined technique, so that the best elements of both systems can be utilized without any loss of pleasure or advantage in registering the ambient sounds.

□ With considerable practice and subject to certain limitations, it is possible, in the writer's view, to interpret the signals to the extent that the objects which are reflecting them can be identified, thereby stimulating the process of visualization in one who has some recollection of sighted experience. In a known area, where the conditions remain unchanged from the situation as learned, this can be done with accuracy. Thus, within the writer's experience in his own locality, recognizing a hawthorne hedge followed by a holly hedge (distinguishable by the different signals) provides at once a point of orientation and the pleasure of recognition. Different types of iron and wooden railings, fences, and walls have their characteristic patterns of sounds, too.

As experience accumulates, it becomes possible to make a good guess concerning the source of certain patterns in a completely unfamiliar area. At this stage, however, it is not possible to venture an opinion about whether such skill could ever be developed to the point of certainty, so that the user of the binaural sensor would be able to go into an entirely unfamiliar area and build up an accurate representation of the environment without any other direct experience of it. Different objects do produce different acoustic patterns; even a conifer and a deciduous tree have different sounds. To this extent, it is accurate to speak of "sound pictures" and of "seeing through sound." In this writer's view, however, such a description can be most misleading, particularly when it is blazoned as a newspaper headline. It is likely to raise false hopes and produce bitter disappointments, especially among relations and friends of blind persons who are liable to interpret such a description in terms of their own appreciation of the comprehensive and all-embracing function of sight.

□ The binaural sensor is no substitute for sight. It is, nevertheless, a significant development and a means of sensing the environment which, this writer believes, will prove to be acceptable and beneficial to many blind people. It is an eminently practical, supplementary mobility aid which, when coupled with the use of the long cane, represents an advance along the road of mobility performance toward an approximation of sighted performance, the ultimate aim of mobility training. It should enhance the mobility potential of those who are trained in its use and it will do much to stimulate interest in mobility training and motivate many individuals to pursue it.

Identifying Objects

Limits

Conclusions

The Fiftieth Anniversary Celebration of the American Foundation for the Blind

The high point of the fiftieth anniversary celebration of the American Foundation for the Blind, October 25-29 at the Plaza Hotel, New York, was the banquet Wednesday, October 27. The 1971 Migel Medal was presented to Jerome B. Wiesner, Ph.D., president of the Massachusetts Institute of Technology, for his efforts in fostering technological research aimed particularly at solving the reading and mobility problems of visually handicapped persons. Lord Fraser of Lonsdale, a British industrialist and board chairman of St. Dunstan's, the famed rehabilitation center for blinded war veterans in London, received the Helen Keller International Award for Outstanding Service to Blind Persons from the American Foundation for Overseas Blind, AFB's sister organization. Jansen Noyes, Jr., chairman of AFB's board of trustees, presented a special citation to Richard H. Migel, vice chairman of the AFB board and son of the late M. C. Migel, in appreciation of the Migel family's more than 60 years of devotion to work for the blind.



Above (l. to r.): Dr. Wiesner being congratulated by John S. Crowley, president of the AFB. Below (l. to r.): Mr. Noyes presenting the scroll to Mr. Migel. Left: Lord and Lady Fraser (seated) are presented with leis by Mrs. Elizabeth H. Morrison, administrator, Hawaii State Services for the Blind; the Helen Keller International Award statuette is on the table in the foreground.





On October 25-27, 60 scientists from eight countries representing a wide range of disciplines met to discuss the subject "Science and Blindness: Retrospective and Prospective." The specific topics discussed included demography; psychosocial, educational, and prosthetics research; evaluation; vocational training; the blindness system; and the interaction of research and social policy. Among those who spoke to the group were Dr. Irving F. Lukoff, Columbia University; Dr. Philip Hatlen, San Francisco State College; Dr. Joan Chase, Rutgers University; Dr. Chester Winton, San Jose State College; Walter Weiss, Roskilde Højskole (Denmark); Dr. B. Roos, Handikappinstituttet (Sweden); Dr. Donald A. Schon, Organization for Scientific and Technological Innovation; Dr. Eric Josephson, Columbia University; Dr. J. A. Leonard, University of Nottingham (Great Britain); Dr. James C. Bliss, Stanford Research Institute; Leon Harmon, Bell Telephone Laboratories; and Dr. Robert W. Mann, Massachusetts Institute of Technology.



Top: Dr. Hyman Goldstein, research biostatistician, University of California at Berkeley, presenting a position paper on "The Demography of Blindness." Center: John S. Crowley, AFB president and general chairman of the seminar, addressing the assembled discussants. (Dr. Jerome B. Wiesner, president of MIT, served as honorary chairman; Dr. Milton D. Graham, director of AFB's Research Department, was the seminar director). Bottom: Dr. Frank Field (right), NBC News science editor, interviewing Dr. Leslie Kay of New Zealand, inventor of the ultrasonic spectacles.





On October 28-29, 120 social scientists, agency personnel, and other experts on blindness attended the AFB National Invitational Symposium on Attitudes Toward Blindness. The meeting, chaired by Joseph Kohn, executive director of the New Jersey Commission for the Blind, began with the presentation of two major papers on the subject of attitudes.

In the first, Dr. Irving F. Lukoff, associate professor of social work research at Columbia University and an expert on attitudes about blindness, reviewed the many complexities of attitude theory and research. He concluded that the sighted person's perception of blindness and blind people seems to be related to the amount of experience he has had with blind persons and, therefore, that blind persons themselves must play an important role in changing the public's attitudes.

In the second paper, Oscar Cohen, national program director of the Anti-Defamation League of B'nai B'rith, urged the development of a concerted legislative program in which all handicapped people would be brought under current state and federal antidiscrimination laws.

The symposium participants met to discuss specific approaches to improving attitudes and presented a long list of recommendations to the AFB on its role as a national leader in work for the blind in implementing needed changes.

Top: Mr. Cohen addresses the symposium, while Dr. Lukoff, at left, looks on. Bottom: One of the four discussion groups—this one dealt with the role of blind persons and their families in improving public attitudes.



Luncheon speakers during the week-long celebration included David Huffman and Miss Gloria Swanson, stars of the hit Broadway show about a blind young man, *Butterflies Are Free*, and Philip McGance, legislative assistant to Senator Jennings Randolph of West Virginia. Mr. McGance read the senator's speech when an impending congressional vote prevented the senator's leaving Washington, D.C.



Pictured at left is the presentation of a salute to the AFB by the President's Committee on Employment of the Handicapped, represented at the ceremony by its chairman Harold Russell (left). J. M. Wooley, vice president of the AFB, accepted the award. A tribute was also made to the AFB by the Council for Exceptional Children. Dr. Jean R. Hebel, president of the CEC, is shown, above, reading the resolution. The AFB itself presented special citations to both the American Association of Workers for the Blind and the Association for Education of the Visually Handicapped in recognition of their important role in the founding of the AFB and their half century of cooperation with it.

Index for Volume 65 of the New Outlook (1971)
Will Be Included With the January 1972 Issue

“Total Life” Rehabilitation for the Mentally Retarded Blind Person

An awareness of the educational and vocational problems of the blind individual who also functions on an intellectually and socially retarded level has led to a cooperative rehabilitation effort between the Tennessee State Services for the Blind and the Orange Grove Center for the Retarded in Chattanooga. The experience in working with the educational problems of the mentally retarded, which Orange Grove Center has acquired over a 15-year period, and the vocational orientation of Services for the Blind were united to produce a program which, it is felt, is unique in its approach to the vocational adjustment of the blind retardate.

□ Until the development of this cooperative program, Services for the Blind had experienced difficulty in finding an appropriate medium for the evaluation, training, and job placement of those intellectually limited clients who could not benefit from the standard educational and training facilities available in Tennessee. There seemed to be no planned approach for meeting the needs of these particular clients, and each agency counselor was more or less left to his own devices in establishing a proper program for his clients. It was found that the programs of the Tennessee State School for the Blind and other agencies and facilities were geared to the blind client who could benefit from advanced academic or fairly high skill vocational training. Facilities which provided evaluation services were similarly concerned primarily with the evaluation of those blind individuals who function on a fairly high level and who are capable of a relatively independent existence while in evaluation or training.

Some two years ago, the personnel at the Orange Grove Center became aware of this problem when a local counselor from Services for the Blind referred two individuals to the Center for vocational evaluation. Recognizing at once their limited ability to deal with these visually handicapped individuals, but also realizing the potential for a significant contribution to the area of the retarded blind, Center personnel began laying the ground work for what was to become the present cooperative project.

Initially, the project was designed to serve those clients of Services for the Blind who were at least 16 years of age, who functioned on an intellectually or socially retarded level, and who needed a vocational evaluation program. Although the initial emphasis of the project was strictly on evaluation, it was soon learned that training is an integral part of any evaluation program. For example, in the evaluation of academic potential, it was quickly determined that all clients coming into the

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Mr. Johnston, a licensed psychological examiner with Psychiatric Services/Chattanooga, Inc., was project director of the program reported in this article.

Services in Tennessee

Origin of the project

Evaluation and training

program needed only basic educational skills and that the presence or absence of these basics could be determined in a "real life" situation rather than a formal academic evaluation. Thus, the "total life" concept, which had been used at Orange Grove for the evaluation and training of the sighted retarded child, was modified for use with the blind retardate.

□ As now constituted, the project evaluates each blind retardate in five basic areas, in situations which as closely as possible approximate "life" as it is outside the boundaries of the center. The areas are mobility, personal-social adjustment, residential living, prevocational skills, and vocational potential. As an example of the unique qualities of the "total life" evaluation program, the blind and sighted retardates live together, work together, and are even instructed in the same classroom together when training is indicated. Both Center and agency personnel feel very strongly that the blind person must live in the sighted world if he is to gain any measure of independence and, therefore, that he should be exposed to the realities of this world as soon as possible. It was found that the clients were very apprehensive and unsure of themselves when exposed to this requirement and much of the planning in the project has been devoted to the remediation of this problem.

Prior to entering the project, each client is given a thorough work-up by the agency counselor—medical, visual, and specialty examinations as indicated. Once referred to the project, each client receives a thorough social case study and a diagnostic psychological examination. These two evaluations emphasize the client's present functional ability rather than I.Q. scores or deviant family interactions. The entire project staff reviews each case and makes specific recommendations regarding the potential of each client to benefit from the "total life" program.

Once accepted in the project, each client receives the benefit of the entire Orange Grove Center complex of services, including those provided by the staff doctor, nurses, dentists, occupational therapist, speech and hearing consultants, recreational specialists, work evaluation specialists, vocational counselors, social service personnel, and educational specialists. All of these services are provided by Center staff who have had long experience in dealing with the problems of the person who functions on a retarded level. In addition, there is the project staff itself, consisting of psychological examiner/project director, mobility instructor, social worker, vocational instructors, vocational counselor, and clerical staff. These individuals have been selected and trained because of their background or interest in working with blind individuals in an evaluative or training capacity.

□ The "total life" evaluation process begins the first moment a trainee becomes associated with the cooperative project and the Orange Grove Center. Prior to admission, each trainee is individually programmed into a specific area of evaluation or training, but any and all of the personnel at Orange Grove Center who have any contact with the trainee are involved in his evaluation. For example, in the area of personal-

The "Total Life" Approach

Before acceptance into the project

Services available

Evaluation

social adjustment, the houseparents, bus drivers, social worker, and class instructors would all make appropriate written comments about their contacts with the trainee in situations both inside and outside the boundaries of the Center.

To provide some consistency in the evaluation program, a project staff member is placed in charge of each particular area of evaluation. This staff member is responsible for coordination of evaluation reports and of all "total life" evaluation criteria in his particular specialty. The project social worker conducts all personal and social adjustment evaluation; the project counselor coordinates pre-vocational and vocational evaluation; the mobility instructor coordinates mobility and orientation evaluation; the vocational instructor coordinates academic and instructional evaluation; and the project director oversees preparation of a monthly report on each trainee.

□ Part of Orange Grove's unique atmosphere can be attributed to the flexible environment which can be tailored to fit the individual trainee's needs. The residence program is structured so that a trainee may progress from a very structured, supervised residence to one approximating life in an independent apartment or boarding house. Similarly, the work settings at Orange Grove can be adjusted from a very simple, structured type of work to a very complex, independent work situation in which the trainee supervises his own progress.

One of the innovative approaches used by the Orange Grove Center's "total life" program can be seen in the integration of blind and sighted persons into the same pre-vocational and vocational training classes. Another is the series of exercises called "cane drill" which is used to introduce the retarded blind trainee to the cane and to cane travel. Further, the personnel in the project are experimenting with a very lightweight fiberglass cane and with an electronically-aided teaching technique which allows one mobility instructor to work with two trainees at once. Psychological evaluation of the retarded blind person has been greatly facilitated by the use of the Haptic Intelligence Scale and Center personnel are experimenting with some new test instruments which show great promise in the area of accurate measurement of the retarded blind person's potential.

Tangible evidence of the "total life" concept is demonstrated by the fact that in the first 18 months of the project, four trainees were placed in competitive employment and two others in semi-sheltered employment situations. This is out of a total initial enrollment of 18 trainees, many of whom are currently receiving advanced or specialized training at the Orange Grove Center.

□ The counselors and administrative staff of Tennessee Services for the Blind have greatly assisted the Orange Grove Center and the project staff in their efforts to establish this program. Their technical help has been invaluable in smoothing out rough spots in the operation of the project. The Center staff, project staff, and agency personnel feel that

(Continued on page 336.)

Organization of evaluation

Flexible Environment

Innovations

Results

Conclusions

Visual Impairment Is Not Blindness

It is generally accepted that most individuals who are labeled "blind" have varying degrees of vision. Nevertheless, those in agencies for the blind, as well as members of the general population, often act, talk, and think as though individuals are only either blind or not blind. In the case of agencies, this kind of stereotyping results in services that are geared largely for totally blind people; further, it is assumed that visually limited persons can benefit from these same services. The emphasis in such programs is on helping people to compensate for their lack of sight through the use of their other senses with little or no attention to the use of their remaining vision. The framework of agency services will in general involve mobility instruction, dependence on tactual usage, and aural reading even though what may be needed is attention to the actual visual potential of individuals. Obviously there are exceptions to this generalization, yet the prevailing attitudes are such that the subject does merit re-examination.

□ First of all, there are very basic differences in the attitudes of sighted people toward those who are blind and those who have limited vision. Blind persons are generally objects of pity and, without going into the many psychological factors involved, it is apparent that there is an overwhelming desire to aid and comfort blind persons. That is why blind beggars can make a go of it on city streets and why agencies for the blind are reluctant to change the word "blind" in their names to "visually impaired" or "visually handicapped." "Blind" has money appeal, while the latter phrases do not. Visually limited people, on the other hand, often arouse irritation and annoyance. They seem unnecessarily awkward or boorish. They bump into things and do not seem to see where they are going at times. They often have unusual postures, cock their heads, or twist their faces. All of these characteristics seem to stimulate distaste and annoyance even though they are simply a result of the individual's determined efforts to make use of what vision he has.

Speaking very generally, there are differences between partially sighted and totally blind persons in addition to their differences in visual acuity. Blind children, for example, are often rather placid and unmotivated. They seem to accept their plight, especially if they have no memory of sight, and must be motivated from the outside in order to grow and develop. Whatever tragedy there is in their lives is usually a result of their emotionally upset parents providing them with a tense and critical environment. Partially sighted children, on the other hand, are often irritatingly persistent and searching. They try to relocate and capitalize on whatever bit of vision that they have. They will often deny

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Mr. Wolf is a regional consultant with the American Foundation for the Blind (Western Regional Office, San Francisco).

Attitudes Toward Two Groups Differ

Actual differences

their problem and try to keep up with their peers. They and their parents never give up the search for improvement or cure. If their condition involves a gradual deterioration of vision, they make continual adjustments to ever new visual situations.

□ All of the differences between blind and visually limited persons need to be better understood and to be reflected in the structuring of services offered by agencies. Since these are more than quantitative differences in vision, each group will very often require a different complex of services. Unfortunately, there is little in the literature to guide the agency wishing to make this distinction, and much research, therefore, needs to be done in this area. Nevertheless, a number of basic principles upon which such services can be based have already emerged.

First, it is clear that there is a difference in the kind of specialists that will make up the rehabilitation teams concerned with the two groups. Once the fact of total blindness is established, there is little need for any continued involvement by ophthalmological or optometric specialists. For partially sighted clients, however, there is a more or less continuous need for the involvement of ophthalmologists and optometrists, a need stemming from the variability of the remaining vision itself and from changes in the functional requirements of the individual as his personal situation is altered by the rehabilitation process.

Second, while blind clients usually require only behavioral services, partially sighted persons may need a combination of both behavioral and medical or physical services. The counsellor needs to know not only about the partially sighted person's social milieu, his interests, his motivations and needs, but also the specific nature of his vision—what he actually sees and under what conditions he sees best. This understanding is best achieved through the cooperative efforts of the entire team, ophthalmologist or optometrist, social worker, rehabilitation counsellor, and teacher. Detailed knowledge about an individual's sight has a significant bearing on how he is to be helped vocationally and even in the development of his life style.

□ Third, whatever vision is available to the partially sighted person should be strengthened or augmented in every way possible, either through mechanical or physical means. Optical aids, which have been steadily improved over the years, are proving to be increasingly effective in assisting partially sighted persons to extend their seeing potential. Vision can also be strengthened through a regimen of eye exercises which help the individual to coordinate eye muscles and otherwise habituate himself to the most appropriate use of his remaining vision. While there is some difference of opinion about the value of this physical approach to the improvement of sight and a good deal of research and study needs to be done in this area, eye exercises under careful supervision have proved to be helpful to some individuals. Whether optical aids or physical exercises are used, however, careful follow-up is needed to assess improvement and to effect whatever changes or adjustments are needed to insure maximum visual functioning.

Principles of Service

Different specialists are involved

Knowledge of remaining vision is essential

Optical Aids and Eye Exercises

Finally, the development of a complex of services that is directly meaningful for persons with some vision must include a basic understanding of the differences between sight and perception. It is now generally acknowledged that a person should use whatever vision he has, not because such use effects any physical change, but rather because visual abilities improve with stimulation and use. When a partially sighted person makes full use of his vision, his perception increases in that what he sees becomes a more meaningful clue to his environment. For example, he may only see a small part of a street sign, but it is enough to tell him whether or not it is the street he wants. He may only be able to see the outline of a tree trunk, yet it tells him that the path to his house is a few steps ahead. Such an increase in the use of visual clues to the environment can be immeasurably important to the partially sighted person.

□ Visual impairment is not necessarily blindness and the requirements of visually impaired persons are in many ways significantly different from those of blind persons. All too often agencies for the blind have not distinguished between these different requirements in providing services. The essential difference is that blind persons must rely on their other senses in order to function, while partially sighted persons must be helped to use whatever vision they have in coordination with their other senses. In providing services to partially sighted persons, the following basic principles should be considered: 1) Full service requires the cooperation of medical, physical, and behavioral specialists; 2) Services for partially sighted clients should be individualized on the basis of their differences in degree and quality of sight; 3) Whatever vision the client has should be augmented or strengthened through either mechanical or physical means; and 4) Clients should be helped to enhance their perception to its maximum functional potential.

Summary

“Total Life” Rehabilitation—Continued from page 333.

this cooperative effort has increased both the quality and quantity of services available to the retarded blind in Tennessee. Had not all the parties involved been working together, this would probably not have been as extensive or as effective as it has. The future success of such cooperative efforts may mean a partial solution of the problems surrounding the provision of services to multiply handicapped blind persons in all areas of evaluation and training.

A Comparison of Teachers' Attitudes

Toward Blindness and Exposure to Blind Children

Public attitudes toward disabled persons, including the blind, have been studied by many researchers, but few have investigated these attitudes in relationship to the exposure of individuals to disabled persons. That this relationship has not been a prime consideration may explain the disagreement among researchers on this subject. Some have found that personal experience with disabled persons is not positively correlated with positive attitudes toward disabled persons^{3,7} and that there is no difference in attitudes toward blindness when they are related to previous contact with blind people.^{2,4,6} On the other hand, some researchers have found that exposure to disabled persons is statistically significant to positive attitudes toward disabled persons.^{1,5}

□ The purpose of this study was to determine whether regular classroom teachers in a school with the facilities of a resource room for blind children would verbally express more positive attitudes toward blindness as measured by a questionnaire than would teachers without this exposure to blind children. The sample in this study was comprised of 46 elementary school teachers from a school district located in a white, middle-class, residential suburb of Los Angeles. Of this total, 28 teachers taught at Elementary School A which has a resource room for blind children. Because of the flexible scheduling at this school, nearly all of the teachers had at one time had a blind child in their regular classroom for at least one hour a day. The other 18 teachers taught at Elementary School B, located in the same district, but with no blind children enrolled.

The Attitudes to Blindness Scale, constructed by Cowen, Underberg, and Verrillo⁴ and consisting of 30 questions, was given to both groups of teachers during a regularly scheduled faculty meeting. The scale was re-titled the Blindness Information Scale (see Table 1); the teachers were told that their responses were being used to help the school district evaluate the kinds of information that should be made available to teachers in the district to serve blind children better. A time-limit of five minutes was imposed to assure quick responses. The questions were answered on a scale of strongly agree (one point), mildly agree (two points), mildly disagree (three points), and strongly disagree (four points) for the positively directed attitudes and vice versa for the negatively directed attitudes. The lower the score, the more positive the attitudes; a score of 30 was, therefore, the most positive score possible and a score of 120 the most negative.

□ A comparison of the mean scores for the two groups of teachers (School A and School B) was computed. Some of the teachers did not respond to all of the questions, so their scores were not used. Table 2 shows

JUDITH KUHN

Miss Kuhn is a teacher of visually handicapped children in the Temple City Unified School District, Temple City, California.

Purpose and Sample

Instrument

Comparison of Mean Scores

Direction* and Number	Item
N1.	A blind person might as well accept the fact that blindness makes people pretty help- less.
N2.	On the whole, blind children seem to be less intelligent than sighted children.
N3.	Blind people are used to failing in most of the things they do.
N4.	A blind person should not have to meet the same standards as others.
N5.	Blind people are constantly worried about the future.
P6.	Blindness has little or no effect upon intelligence.
P7.	A blind person is not afraid to express his feelings.
N8.	A blind person can never really be happy.
N9.	Most blind people are dissatisfied with themselves.
N10.	A blind person can't afford to talk back to people.
P11.	One can live in a competitive society and still compete successfully without sight.
N12.	It makes me feel a little guilty to know that I can see and others cannot.
N13.	You should not expect too much from a blind person.
N14.	Most blind people feel that they are worthless.
P15.	It is possible to know the beauty of the world without sight.
P16.	My attitude towards a blind person would be based more upon his personality than upon the fact that he is blind.
N17.	Blind people do not have as much initiative as sighted people.
N18.	It is very difficult to make a blind person change his mind once he has decided on something.
N19.	It must be bitterly degrading for a blind person to depend so much upon others.
P20.	Many blind people are economically independent.
N21.	Blind people are more easily upset than sighted people.
N22.	Most blind people think and act alike.
N23.	It's difficult to understand the blind because they keep so much to themselves.
P24.	There are things worse than being blind.
P25.	Acceptance of blindness is the same thing as acceptance of anything else in life.
N26.	The blind adult is not quite as mature or "grown-up" as the sighted adult.
P27.	Blindness does not change the person any more than any other physical handicap.
P28.	The blind have as many interests as the sighted have.
N29.	I feel that blindness is as hard to bear as complete paralysis.
N30.	A blind person is constantly worried about what might happen to him.

*.N indicates keying negative attitudes for agreement; P, positive.

the results of the comparison, which was not significant at the .05 level. Though the means did not differ, the scores of 43 are about 10 points lower than the mean scores of the college students tested by Cowen, Underberg, and Verrillo.⁴ This could be due to the differences in the two groups (teachers versus college students) or to the 12-year lapse between the two studies (1970 versus 1958).

□ Each question on the questionnaire was analyzed by computing the chi square on the two variables, exposure to blind children and attitudes toward blindness. The teachers from School A and School B were compared

	Mean	SD	Significance (.05)
Group A (N=21)	43.5	8.5	NS
Group B (N=11)	43.3	7.2	

TABLE 1
Attitudes to Blindness Scale

Chi Square Analysis

TABLE 2
Comparison of Mean Scores

Question	Chi Square	Question	Chi Square	Question	Chi Square
1.	1.72	11.	4.58	21.	5.10
2.	1.33	12.	5.44	22.	1.05
3.	1.42	13.	1.11	23.	2.04
4.	5.14	14.	4.49	24.	4.15
5.	0.30	15.	6.09	25.	3.80
6.	1.29	16.	0.30	26.	6.08
7.	3.26	17.	1.61	27.	3.65
8.	2.19	18.	0.53	28.	2.40
9.	1.31	19.	1.03	29.	2.69
10.	4.12	20.	6.05	30.	2.32

* All scores are *not* significant at the .05 level.

by the different number of responses of strongly positive, mildly positive, mildly negative, and strongly negative attitudes for all 30 questions. Table 3 shows that there were no significant findings. Note that all of the questionnaires were used for the chi square analysis because total scores are not necessary in such computations.

Since it was statistically shown that the two groups of teachers did not differ significantly, a rank was compiled consisting of the questions receiving the most number of positive responses, both strongly and mildly (Questions 2, 1, 8, 13, 16), and the questions receiving the most number of negative responses, both strongly and mildly (Questions 27, 5, 7, 4). This information explains itself and will not be discussed.

□ This study makes it quite obvious that merely placing a blind child in a regular classroom and allowing a regular elementary school teacher to work with that child does not mean conclusively that that teacher will have a more positive attitude toward blindness than one who has never taught a blind child. The two groups of teachers did not differ even though one group had, at one time or another, had exposure to blind children in their regular classroom for at least one hour a day. Also, since the resource room for blind children had been at School A for approximately 18 years, several of the teachers had had that many years of exposure.

This same type of research is needed in other areas where agencies have been set up to deal exclusively with blind persons. Do such agency workers have a more positive attitude toward blindness than workers in agencies not dealing exclusively with blind persons? If exposure does not lead to a more positive attitude toward blind persons, then what other activities are needed for those who work with the blind? In other words, if a positive attitude toward blindness is an asset in helping the blind individual, then it is necessary to find ways of assuring this attitude. There are several such techniques that could be investigated: in-service training, more information about blindness and blind adults, role-playing, up-dating college courses, etc. We can no longer assume that positive attitudes toward blindness will come about automatically through exposure to blind persons.

TABLE 3
Chi Square Analysis

Conclusions

Other areas for future research

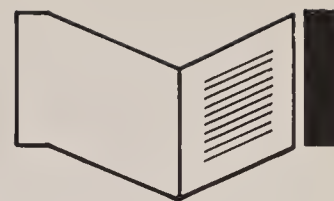
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6. Rusalem, H. "The Environmental Supports of Public Attitudes Toward the Blind," *Outlook for the Blind* 44(1950):277-88.
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Project: Banking and the Blind—Continued from page 323.

Alexander, ABA executive vice president, presented two copies of each edition to the Division for the Blind and Physically Handicapped, Library of Congress, Washington, D.C.

Visually handicapped persons throughout the country are also now able to handle their own financial dealings with banks more easily and privately as the result of a new combined script-and-braille checkbook called the Checkwriter. Developed by the Chemical Bank, New York City, the Checkwriter consists of a pair of hinged aluminum plates with horizontal writing-guide slots for date, payee, amount, and signature. Over other areas of the check, braille cells are set up for transcribing necessary information on the check stub for end-of-the-month balancing of statement and checkbook records.

A so-called "Braille Account" can also be set up so that the blind person can receive his bank statement in both print and braille. Information regarding the Checkwriter and on setting up "Braille Accounts" at a local bank is available from Walter Sauerman, Room 1415, Chemical Bank, 20 Pine Street, New York, New York 10015.



Teaching the Visually Limited Child, by Virginia E. Bishop. Charles C Thomas, Publisher (301-327 East Lawrence Avenue, Springfield, Illinois 62703), 1971, ix, 214p. \$9.50. A book to help the classroom teacher understand and work with blind and partially sighted children. It contains information on such matters as developing listening skills, adapting academic subjects, and locating special equipment and material.

Overall Body Protection for the Blind, by J. D. Armstrong. *Ergonomics* (Taylor and Francis, Ltd., Red Lion Court, Fleet Street, London, E. C. 4, England), Vol. 14, No. 2, March 1971, pp. 205-17. Description of a system combining the use of two mobility aids—the cane and the head-mounted ultrasonic sensing device.

Making Learning Real Fun for Blind Children, by Elizabeth Freund. *Unesco Courier* (United Nation's Educational, Scientific and Cultural Organization, 317 East 34th Street, New York, New York 10016), May 1971, pp. 28-31. Illustrated article about the "Touch and Learn Center" at Overbrook School for the Blind in Philadelphia, Pennsylvania.

Educational and Vocational Placement, and Low-Vision Corrections in Albinism, by Gerald Fonda, Henry Thomas, and George V. Gore. *The Sight-Saving Review* (National Society for the Prevention of Blindness, Inc., 79 Madison Avenue, New York, New York 10016), Vol. 41, No. 1, Spring 1971, pp. 29-36. Report based on 253 patients divided by age into two groups: under 23 years of age (180 patients); 23 years and older (73 patients).

Encouragement of Sensory Motor Development in the Preschool Blind, by Carroll B. Parten. *Exceptional Children* (The Council for Exceptional Children, Jefferson Plaza Suite 900, 1411 S. Jefferson Davis Highway, Arlington, Virginia 22202), Vol. 37, No. 10, Summer 1971, pp. 739-41. Description of teaching techniques developed at the Blind Children's Center in Hollywood, California.

Blind Volunteers Serve Others! *Serve Newsletter* (Community Service Society, 105 East 22nd Street, New York, New York 10010), No. 18, July 1971, pp. 1-4. Illustrated story of blind and partially sighted older persons who have joined SERVE programs in the state of New York.

A Comparative Study of Piaget's Developmental Schema of Sighted Children With That of a Group of Blind Children, by Milton Gottesman. *Child Development* (University of Chicago Press, 5750 Ellis Avenue, Chicago, Illinois 60637), Vol. 42, No. 2, June 1971, pp. 573-80. Paper based on the author's Master's thesis, Syracuse University, concerning a study of haptic perception.

A Job Made to Order, by Janet Cutler. *Dialogue* (Dialogue Publications, Inc., 3100 Oak Park Avenue, Berwyn, Illinois 60402), Vol. 10, No. 3, Fall 1971, pp. 71-73. The story of Robert Welch, the blind X-ray developer who heads Passavant Hospital's (Chicago) program for training blind persons as darkroom technicians.

Lionism Honors a Lady of Courage, by Patricia A. Peliwo. *The Lion* (Lions International, York and Cermak Roads, Oak Brook, Illinois 60521), Vol. 54, No. 3, September 1971, pp. 20-22. Illustrated story of the dedication of the memorial fountain and garden built by the Lions of Alabama in honor of Helen Keller. —M.M.R.

News in Brief



■ The Christian Record Braille Foundation, Inc., has begun a fund-raising project in which the contributing public is asked to send in cancelled postage stamps, both domestic and foreign, commemorative and regular. These are sorted by volunteers and sold in quantity to a used stamp dealer. The address for the campaign is Stamps for the Blind, Box 6097, Lincoln, Nebraska 68506.

■ Visually handicapped typists using the IBM Magnetic Tape "Selectric" Typewriter (MT/ST) are able to correct their own typing errors by simply back-spacing and typing in the correct letter or word. The MT/ST, which has a conventional typewriter keyboard, uses a magnetic tape to store typed information in coded form for later retrieval and print out. Back-spacing to the site of the error simul-

taneously rewinds the tape to the same point. By typing in the correct character, the error is automatically erased from the tape and replaced by the correct one. According to the Office Products Division of IBM, there are 18 visually handicapped typists in the Washington, D.C., area alone using the MT/ST. Because the fear of errors is eliminated, these typists have been able to increase their speed significantly.

■ The current fall term of the New York Association for the Blind's Adult Education in Leisure Time Activities program involves a curriculum of very topical and interesting subjects, including contemporary moral issues; film criticism and interpretation; apartment gardening; discotheque dancing; a fondue, quick-breads, and gift foods class; two classes called "Exploring New York"; plus a variety of physical education, recreation, arts and crafts, and personal enrichment courses.

■ Serve and Enrich Retirement by Volunteer Experience (SERVE) is an organization sponsored by the Community Service Society of New York which is dedicated to providing assignments for volunteers who are 60 years of age or older. Elderly blind persons all over the state have recently begun to join and are serving in a variety of ways. According to the SERVE newsletter (July 1971), six elderly blind persons are serving at each of the following institutions or programs: Willowbrook State School (for the retarded), Staten Island; Berry Houses Senior Center, Staten Island; Creedmoor State Hospital (for the mentally ill), Queens Village, Long Island; and Syracuse Psychiatric Hospital and the State University of New York-Upstate Medical Center, Syracuse.

The use of elderly visually handicapped volunteers grew out of a meeting of the New York State Pilot Project on Aging and Blindness, sponsored by the American Foundation for the Blind, to which the staff of SERVE was invited to speak. After a great deal of careful planning, recruitment and operating procedures were established and the program was launched in the spring of 1971. The early results of the project indicate that the visually handicapped volunteers are providing valuable assistance and, in turn, are benefitting greatly from their activity.

■ According to the newsletter of the Tennessee Department of Public Welfare (August 1971), inflation has seriously affected an important area of service. In 1969-70, sight conservation services were provided by the state to 7,920 individuals at a cost of \$198,967.24. In 1970-71, because of a rise in the cost of services and

supplies, it cost \$212,142.19 to provide service to 7,499 individuals, an increase of approximately \$3.27 per person.

■ Audio-Reader is a new 12-hour daily program of radio broadcasting produced by the University of Kansas, Lawrence, in conjunction with the Kansas State Services for the Blind. The broadcasts, which consist entirely of the spoken word (books, magazines, newspapers, talk shows, and interviews), can only be heard on special pre-tuned radio receivers (lent by the University without fee to all eligible persons in the area). The "locked-in" frequency of the FM subcarrier signal can be received within a 50-mile radius of the station in Lawrence, an area which includes Topeka and metropolitan Kansas City. Further information is available from Audio-Reader, Broadcasting Hall, University of Kansas, Lawrence, Kansas 66044.

■ Dr. I. M. Neou and his staff at the Visual Prosthetics Laboratory, Department of Mechanical Engineering, West Virginia University, Morgantown, have developed a prototype model of a braille verifier for blind typists. The verifier, which can be attached to a standard manual or electric typewriter, produces a braille display of the line typed on a special belt which contains a set of moveable pins for forming the braille characters and allows the typist to check his work tactually. The device also includes an electronic encoder, which produces the braille on the belt, and a mechanical eraser for resetting the pins so that they can be used again. In its present form, the device is not available to typists, although Dr. Neou is hopeful that it will be possible in the near future to produce a verifier that could be sold for as little as \$200. The development of the prototype was supported by the U.S. Social and Rehabilitation Service and the West Virginia Division of Vocational Rehabilitation.

Appointments

■ Committee for Purchases of Products and Services of the Blind and Other Severely Handicapped: chairman, **Rear Admiral Kenneth R. Wheeler**, commander, Naval Supply Systems Command.

■ Southwest Texas Lighthouse for the Blind, Lubbock: **A. O. Robertson**, executive director.

■ Mississippi Industries for the Blind, Jackson: **Douglas F. Price**, executive director.

■ Alabama State Division of Rehabilitation and Crippled Children: **George M. Hudson**, director.

■ Greater Detroit Society for the Blind: **David L. Banks**, public health educator.

■ Alaska State Department of Health and Social Services: **Frederick P. McGinnis**, commissioner.

■ Virginia Commission for the Visually Handicapped: **Miss Dorothy V. Corvin**, coordinator of eye health services.

■ Ophthalmological Advisory Group, U.S. Food and Drug Administration: chairman, **A. Edward Maumenee, M.D.**, Wilmer Institute, Johns Hopkins University and Hospital, Baltimore.

Awards

■ Lighthouse Award for Distinguished Service, New York Association for the Blind, New York City: **R. Townley Paton, M.D.**, Southampton, New York, founder of the Eye-Bank for Sight Restoration.

■ Louis B. Mayer Scholar, Research to Prevent Blindness, Inc., Scholars Program: **Robert Machemer, M.D.**, assistant professor, Department of Ophthalmology, University of Miami (Florida) School of Medicine.

Correction

On page 241 of the October 1971 issue of the *New Outlook for the Blind*, the article entitled "Five Days at Vinton: The Birth of the American Foundation for the Blind" is incorrectly identified as "Part One." The article is complete as published in that issue. The editors had originally planned to publish this 20-page excerpt from Frances A. Koestler's forthcoming book in two parts; the title was inadvertently left unchanged when the two parts were combined into one.

Coming Events

December 8-11 American Public Welfare Association, National Round Table Conference, San Francisco.

1972

February 27-March 3 Society of Contemporary Ophthalmology, Winter Meeting, Hollywood, Florida.

March 16-18 California Transcribers and Educators of the Visually Handicapped, 13th Annual Conference, North Hollywood, California.

March 19-25 Council for Exceptional Children, 50th Annual International Convention, Washington, D.C.

March 26-30 American Personnel and Guidance Association, Annual Convention, Chicago.

April 2-7 Ninth Pan American Congress of Ophthalmology, Houston.

April 5-6 American Geriatrics Society, Annual Meeting, New York City.

April 5-8 American Orthopsychiatric Association, 49th Annual Meeting, Detroit.

April 17-21 European Society of Ophthalmology, Fourth Congress, Budapest, Hungary.

April 24-28 Association for Research in Vision and Ophthalmology, Spring Meeting, Sarasota, Florida.

May 14-20 National Conference on Social Welfare, 99th Annual Forum, Anaheim, California.

May 15-19 National Braille Association, 12th National Conference, San Francisco.

May 29-31 American Ophthalmological Society, 108th Annual Meeting, Hot Springs, Virginia.

June 4-8 Special Libraries Association, Boston.

June 25-29 Association for Education of the Visually Handicapped, 51st Biennial Conference, Miami Beach.

July 2-7 International Association of Gerontology, Ninth International Congress, Kiev, U.S.S.R.

July 26-August 2 International Council of Educators of Blind Youth, Fifth Quinquennial Conference, Madrid, Spain.

August 13-19 International Council on Social Welfare, 16th International Conference, The Hague, Netherlands.

August 27-September 1 International Society for Rehabilitation of the Disabled, 12th World Congress, Sydney, Australia.

September 11-13 Gerontology Around the World, 25th Annual Conference on Aging, University of Michigan, Ann Arbor.

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INDEX

THE NEW OUTLOOK FOR THE BLIND

VOLUME LXV, 1971

Inclusive page numbers for each issue:

JANUARY	1- 40	JUNE	169-200
FEBRUARY	41- 72	SEPTEMBER	201-240
MARCH	73-104	OCTOBER	241-280
APRIL	105-136	NOVEMBER	281-312
MAY	137-168	DECEMBER	313-344

- | | | |
|---|---|--|
| <p>Abacus
 articles on, 11, 114
 blind operator, 112-6
 Cranmer, 41, 42, 112-6
 contests, 41-8
 in England, 113
 instruction, 41, 112-6
 and number concepts, teaching of, 115
 thirteen-column, 115
 twenty-three-column, 115
 vocational use of, 113-4</p> <p>Accident prevention, 209</p> <p>Accreditation
 fringe benefits for residential schools, 220-31
 list, 309</p> <p>"Accreditation Questions and Answers, 35, 69-70, 100, 132, 195-6, 233-4</p> <p>Acuff, Sidney A., 135</p> <p>Adapting Science Materials for the Blind, 190-4</p> <p>Adventitiously blind adult
 cooking, teaching of to, 149-54</p> <p>Agencies
 and the aging blind, 202
 courses for personnel of, 166
 national voluntary, role of, 108-11
 psychosocial casework approach, 298-306
 state, early, 246
 and the visually impaired, 335</p> <p>Agency coordination, 25-30</p> <p>Agency referrals, sources of, 49-50</p> <p>Aging, the
 Areawide Model Projects Program, 306-7
 and blindness, 51, 201-19</p> | <p>and disease, 217-18
 and eye disease, 204-9
 Institute of Gerontology, 24th annual conference, 165
 legislation for, 51-5
 National Council on Aging, 201
 Older Americans Act, 307
 problems of, 217-19
 Retired Senior Volunteer Program (RSVP), 307
 Senior AIDES, 203
 Veterans Administration hospital admittance, 70
 vision screening of, 213-15
 White House Conference on, 31-2, 201, 306</p> <p>Aging blind, the
 and hobbies, 64
 and legislation, 51-5, 215
 Medicare aid for, 18-20
 in minority groups, 202-3
 National Task Force on Geriatric Blindness, 201
 population of, 65
 recreational survey of, 63-7
 rehabilitation service for, 55
 symposium, 201-19
 and welfare reform, 215-16</p> <p>Aids and appliances
 Audio Response Time-shared System, 219
 aural detector, 78
 for students, 271-5
 (See also specific name of item)</p> <p>Albany Association for the Blind, 38</p> <p>Allen, Edward Ellis, 243, 257</p> <p>Allyn, Don, 166</p> | <p>American Association of Instructors of the Blind, 243-4</p> <p>American Association of Workers for the Blind, 109, 241, 243, 245
 and the aging blind, 54
 citation, AFB, 230</p> <p>American Bankers Association, 323</p> <p>American Blind People's Higher Education and General Improvement Association, 244</p> <p>American Council of the Blind
 and the aging blind, 54
 book location service, 236</p> <p>American Foundation for Overseas Blind, 278</p> <p>American Foundation for the Blind, 209
 and the aging blind, 54, 201-19</p> <p>American Association of Workers for the Blind, citation, 230</p> <p>Association for Education of the Visually Handicapped, citation, 230</p> <p>"Attitudes Toward Blindness", a symposium, 197</p> <p>birth of, 241-60</p> <p>fiftieth anniversary, 176, 197, 327-30</p> <p>fiftieth anniversary editorial, 232-33</p> <p>New York State Pilot Program on Aging and Blindness, 342</p> <p>Personnel and Training Service discontinued, 237</p> <p>role of, 108-11</p> <p>salute, presidential, 330</p> <p>"Science and Blindness," 197</p> <p>sex education programs for visually handicapped, 218</p> <p>American Library Association, Francis J. Campbell Award, 238</p> |
|---|---|--|

American Printing House for the Blind, 90
 Cranmer abacus, 112
 music notation into braille by computer, 134
 American Red Cross, 247
 braille transcribing service, 247
 American Vocational Association
 publications, list of, 198
 Anderson, Richard R., 198
 Arizona State Department of Public Welfare, Division of Rehabilitation for the Visually Impaired, 278
 Aronson, Warren, 39
 Association for Education of the Visually Handicapped, 109
 citation from AFB, 230
 Attitudes, changes in, 232
 Audio Response Time-shared System, 219
 Auditory discrimination tapes for teaching (Polysounds), 102
 Aural learning, 224-9
 Australia, National Guide Dog Training Centre, 102
 Australia, Royal Guide Dogs for the Blind, 102
 Australian National Council for the Blind, 102
 Ayres Space Test, 84

Backpacking, 145
 Baker, E. A., 87
 Balance beams (Polygrid), 102
 Banking and the blind, 323, 340
 Banks Brailier, 14
 IBM Braillewriter, 14
 Banks, David L., 342
 Barden-LaFollette amendments, 248
 Barnett, M. Robert, 134
 editorial, 50th anniversary, 276
 Bartlett Award, 1971, 238
 Bax, James A., 278
 Baylor, Robert, 135
 Bell Greve Award, 102
 Bender Gestalt Test, 83
 Bennett Hand-Tool Dexterity Test, 81
 Best, Harry, 237 (obituary)
 Beth Israel Medical Center, 309
 Bledsoe, C. Warren, 250
 "Gearing to Meet the Challenge of the Decade," 105-7, errata, 279
 Bidgood, Frederick E.
 "A Study of Sex Education Programs for Visually Handicapped Persons," 318-23
 Binaural sensor as mobility aid, 324-6
 instructors, courses for, 324
 training in use of, 324
 (See also ultrasonic spectacles)
 Birchard, Florence, 247
 Blind, the
 (See aging, adventitious, child, congenitally, and deaf-blind)
 and infant care, 169-86
 intermediate care services for, 236
 legislation for, 51-5
 mentally retarded, rehabilitation for, 331
 mother, 169-74

parents, 169-86
 population, 52
Blind Children of the World (film), 165
 Blinded Veterans Association, 290
 and the aging blind, 54
 Blindness
 and aging, 201-19
 and the aging, 51
 Attitudes to Blindness Scale, 337
 "Blindness, Attitudes Toward," AFB symposium, 329
 "Blindness System, the", 110
 congenital and adventitious, differences between, 149-50
 effect of, 233
 prevention of, among the aging, 209-13
 psychological aspects of, 122, 298-306
 reaction to, 298-306
 and sculpture, 61-2
 teachers' attitudes toward, 337-40
 and visual impairment, 334-6
 Bliss, James C., 328
 Blix, Sue and E. Elaine Eastman
 "The Importance of Community Recreation Programs for Visually Handicapped People," 144-8
 Book location service, 236
 Books
 scented, 30
 Bordley, James, Jr., 258
 Boston College
 ultrasonic spectacles, 163
 ultrasonic spectacles testing and evaluation, 38
 Bott, Joan E. and Carson Y. Nolan
 "Relationships Between Visual Acuity and Reading Medium for Blind Children—1969," 90-6
 Boulter, Eric, T., 135
 Boyd, Gerald B., 39
 Boyle, Mary Eleanor, 39
 Braille
 account, bank, 340
 books, 274
 checkbook (Checkwriter), 340
 children's book award, 237
 in computer programming training, 70
 music notation by computer, 134
 National Braille Association, National Conference, 70
 Nemeth Code of Mathematics and Scientific Notation, 14
 paper money, markings on, 310
 and Swedish computer alphabet, 223
 Transcribers Club of Illinois, 70
 verifier for blind typists, 342
 Vocational Interest Scale administered in, 20
 Brailier
 Banks, 14
 IBM, 14
 Braille, Louis, Award, 238
 Braille Transcribers Club of Illinois, 70
 Braillewriter
 calculating with, 112
 Bray, Robert S., 236
 Bridges, William V., 70
 award, 310

Briller, Stanley and Susan S. Richards
 "Learning From Experience: A Revisit to the Children's Corner," 73-8
 Briller, Stanley and Becky Morrisson
 "Teaching Rock and Roll Dancing to Totally Blind Teenagers," 129-31
 Brooks, George T., 278
 Brothers, Roy J.
 "Learning Through Listening: A Review of the Relevant Factors," 224-31
 Bureau of Labor Statistics, 110
 Burritt, Olin H., 243

California League for the Handicapped, 291
 California School for the Blind, 56
 California State Department of Vocational Rehabilitation, 56
 Camp
 Seeing Hand Camp, 134
 Campbell, Charles F. F., 248, 259
 Campbell, Francis Joseph, Award, 38
 Camping, 145
 Canadian National Institute for the Blind, 87, 243, 246
 Cane
 training mentally retarded blind, 333
 travel in winter, 8-11
 Cargill, Joanna
 "Our Set of Circumstances," 174-80
 Carolan, Robert, 310
 Carreon, Reynaldo, J., 166
 Carris, Lewis H., 247
 Carroll, Thomas J., 197 (obituary), 199, 310
 Catholic Guild for All the Blind (Massachusetts)
 ultrasonic spectacles, training in use of, 70
 Cataract
 with glaucoma, 211
 removal and adaptation of vision following, 205-6, 281-6
 surgery, 205
 treatment of, 209
 visual functioning with, 205
 Chase, Joan, 328
 Chemistry
 teaching to visually handicapped high school students, 313-7
 Chicago Lighthouse for the Blind, 247, 278
 Child, blind, the
 and adult relationships, 74
 autistic-like behavior in, 141
 braille reading and writing for, 14
 child development group for, 73-8
 junior high readiness for, 12-17
 and music, 73-8
 personality, early in, 137-43
 play equipment for, 73-8
 recreation for, 291-6
 and tactile experience, 73-8
 and visual acuity and reading medium, 90-6
 Child, blind, multiply handicapped, the
 building self-confidence in, 152-4
 education and habilitation of, 56-61

- Christian Record Braille Foundation, Inc.
 Stamps for the Blind, 341
 Cincinnati Association for the Blind, 37
 City, scale model, 38
 Cleveland Society for the Blind, 247, 309
 Clunk, Joseph F., 246
 Cohen, Oscar, 329
 Coker, Gary and Marian Lewis
 "The Use of Abacus Contests to Increase Interest in Mathematics," 41-8
 Commission on Uniform Type, 245
 Committee on Employment of the Handicapped, 330
 Community Services for the Blind
 dancing, teaching rock and roll to teenagers, 129-31
 recreation for the visually handicapped, importance of, 144-48
 Computer
 alphabet, 223
 programmer training, 70
 terminals in home or office, 219
 Computing devices, 112
 COMSTAC report, 66
 Congenitally blind, the
 child, autistic behavior in, 141
 child, early personality in, 137-43
 cooking, teaching of to, 149-54
 Cooking
 teaching of to congenitally vs. adventitiously blind, 149-54
 aids, 150-4
 Corvin, Dorothy V., 342
 Cosgrove Report, 120
 Cottrell, Fred, 31
 Coughlan, Barbara C.
 "Future Directions of Government Programs," 215-7
 Council for Exceptional Children, 330
 Cozier, J. Kenneth, award, 310
 Cranmer, T. B., 112
 Crawford, Frances
 "Present-Day Concepts and Practices of Rehabilitation Teaching," 120-5
 Criss Cole Rehabilitation Center for the Blind, 297
 Crowley, John S., 327, 328
 Crowther, Elaine P., 238
 "Current Literature," 36, 68-9, 101, 133, 164, 196-7, 234-6, 277, 308, 341
 Curtis, Charles K.
 "Teaching Geography to Blind Students: A Plea for Investigation," 187-9
 Curtis, John B., 246
 Curtis Interest Scale in braille, 20
- Dana, Leslie, Award, 199
 Dancing
 folk and social, 294-5
 rock and roll, teaching to blind teenagers, 129-31
 Daniel, Johnnie B., 166
 Data processors
 international organization, 165
 Dau, Billy M., 135
 Davidow, Mae E., 115
 Davis, Audrey, 39
- Davis, Zelda, 135
 Day, Helen Herrier, 134 (obituary)
 Deaf-blind, the
 International Conference of Educators of the Deaf-Blind, 165, 198
 National Center for Deaf-Blind Youths and Adults, 165
 play activities for child, 74-5
 DeCaprio, Nicholas S.
 "Factors Affecting the Child's Evaluation of the Visually Handicapped Parent," 181-6
 Delta Gamma Foundation, 37
 Diabetic retinopathy
 low-vision aids in, 208
 treatment of, 207-8, 211-12
 Disability insurance program, 53
 Disabled persons, intermediate care, 236
 Dog guides, Australia, 102
 Dover, Frances T.
 "The Case Study Approach in an Agency for the Blind," 298-306
 Downeast Recording Library for the Blind (Maine), 37
 Dramatics, 295
 DuVal, Merlin K., Jr., 278
 Dykstra, Franz, 39
- Eastman, E. Elaine and Sue Blix
 "The Importance of Community Recreation Programs for Visually Handicapped People," 144-8
 Editorial Notes
 AFB 50th anniversary, 232-3, 276
 ultrasonic spectacles, 163
 Education
 accreditation of residential schools, 220-23
 advances in, 232
 computer programmer training, 70
 chemistry, high school, for visually handicapped, 313-7
 and habilitation of multiply handicapped blind youth, 56-61
 International Council of Educators of Blind Youth, 1972 conference, 275
 junior high readiness, 12-17
 listening skills, 265-70, 275
 pioneers in, 243-5
 reinforcement and the multiply-handicapped blind child, 97-9
 sex education programs for visually handicapped, 318-23
 study aids, 271-5
 Educational Tape Recording for the Blind, 273
 Edwards, Donald H., 102
 Egypt, blindness in, 6
 Elkin Award, 38
 Elliot, Lois, 39
 Elmer, Rudolph, 39, 134
 Employment
 in hospital work, 309
 (See also occupations)
 Etherington, Edwin D. (Ted), 238
 Evansville (Indiana) Association for the Blind, 278
 Evergreen, 248, 258
- Eye disease
 cataract, 205-6, 209-10
 diabetic retinopathy, 207-8, 211-2
 geriatric, visual function in, 204-9
 glaucoma, 207, 210-11
 glaucoma with cataract, 211
 macular degeneration, 206, 212-13
 trachoma, 209
 Eye exercises for the visually impaired, 335
- Farley, Robert E., 237
 Faulkes, W. F., award, 198
 Faye, Eleanor E.
 "Visual Function in Geriatric Eye Disease," 204-8
 Federal Board for Vocational Education, 247
 Field, Frank, 328
 Films
Blind Children of the World, 165
 on residential training program, 237
 Fitch, William C., 202
 Flemming, Arthur S., 278
 Foley, Kate M., 243, 247
 Ford Foundation, 203
 Foveomacular retinitis, 62
 Frampton Hall, school for multiply handicapped blind children, 237
 Frampton, Merle E., 134, 237
 Fraser of Lonsdale, Lord, 278
 Helen Keller Award, 327
 Freeman, Michael J., 238 (award)
 Freyberger, Patricia E.
 "Comparative Methods in Teaching Cooking to the Congenitally vs. the Adventitiously Blind Adult," 149-54
 Friedman, Tully M., 39
 Friese, Willis R., 278
 Fritz, Milo, 209
- Garrett, James F., award, 198
 Geadistix Think Sticks, 128
 General Service Foundation, 318
 Geography, teaching of to blind students, 187-9
 Geriatric
 Blindness, National Task Force on, 201
 eye disease, visual function in, 204-9
 (See also Aging and Aging Blind)
 Gettys, Maurice, 166
 Gilbert, Helen H., 198
 Gillis, James, 39
 Gissoni, Fred L., 112
 Glaucoma, 89
 with cataract, 211
 detection and treatment of, 210
 low-vision aids in, 207
 treatment of, 207
 Glover, Calvin S., 246
 Goldstein, Hyman, 328
 Goldthwaite, Lucille A., 247
 Goodwill Industries, Dayton, 38
 Government programs, future of, 215-17
 Graham, Milton D., 232-3, 328
 Grants
 Federal—Cleveland Society for the Blind, 309

Greater Detroit Society for the Blind, 236
Greater Pittsburgh Guild for the Blind,
President's Award, 310
Guide Dog Training Centre, Australia, 102

Hadley School for the Blind

computer programmer training, 70

Hale, A. Webb, 31

Hamlin Report, 66

Hansen, Robert A., 39

Hanson, Howard H.

"Vision Screening of the Aged," 213-5

Handicapped Person of the Year Award, 238

Handicapped, the

Barlett Awards for building free of physical barriers to, 238

dormitory for, 237

Travel Information Service for, 237

Haptic Intelligence Scale

for Adult Blind, 84

for the retarded blind person, 333

Harmon, Leon, 328

Harper, Grace S., 252

Harris, Travis, 236

Hartong, Jack R.

"Expanded Opportunities for Multiply Handicapped Children," 117-9

Hatlen, Philip, 328

Hattendorf, Janice K.,

"An Abacus Update," 112-6

Hayes, Charles B., 243

Hebeler, Jean R., 330

Hellinger, George O.

"Providing Ophthalmological and Optometric Diagnostic Examinations and Optical Aids for Legally Blind Aged Persons Under Medicare," 18-20

Hendrix, Seid, Award, 70

Herman, Steve, 166

HEW

blind teachers, employment of, 1-6 grants, 37

National Center for Deaf-Blind Youths and Adults, 165

Hiking, 292-3

(See also backpacking)

Hissrich, Henry R., 39

Historical exhibit, tactual, 198

Holmes, Arthur E., 248

Holmes, Charles W., 246

Home management center, 237

Honoree, Sondra, 135

Hoover, Richard E., award, 238

House-Tree-Person Test, 84

Housing for the aging, 54

Hudson, George M., 342

Huffman, David, 330

Hunter, Woodrow W., 165

IBM Aptitude Test for Programmer Personnel, 82

Identification cards for visually handicapped, 309

Illinois Braille and Sight Saving School, 117 and multiply handicapped children, 117-9

Illinois, multiply handicapped children, education of, 117-9

Illinois Society for the Prevention of Blindness, 247

Illinois State Department of Children and Family Services, 63

Illinois Visually Handicapped Institute, 66, 262

Index, vision, 309

Industrial Home for the Blind, Brooklyn, 246

home management center, 237

low-vision clinic, 237

National Center for Deaf-Blind Youths and Adults, 165

nursery school, 237

Inflation and welfare services, 342

Ingham, Kenneth R., 219

Inkster, Douglas E., 310

Intelligence tests,

(See psychological tests)

International Conference of Educators of Blind Youth, 275

Iowa Association of the Blind

laws protecting the blind pedestrian, 310

Iowa Braille and Sight Saving School, 242, 278

Iowa College for the Blind, 241

Iowa School for the Blind, 242

Ireland, Ralph, 66

Irwin, Robert B., 246, 255, 260

Isometric Representations Kit, 126

Jernigan, Kenneth, 134

Jewish Guild for the Blind, 309

City Center, 131

Johanna Bureau for the Blind and Visually Handicapped, 70

Johnson, Gil and Dean Tuttle

"Education and Habilitation of Multiply Handicapped Blind Youth," 56-61

Johnson, Suzanne

"Sources of Agency Referrals," 49-50

Johnston, Benjamin C.,

"'Total Life' Rehabilitation for the Mentally Retarded Blind Person," 331-3

Johnston, F. W., 243

Joint Services Electronics Program, 219

Josephson, Eric, 328

Kahn, Harold A., 89

Kapela, Edith Largy

"Junior High Readiness and the Blind Child," 12-17

Kansas Rehabilitation Center

listening skills education, 265-70, 275

Kansas State Services for the Blind

Audio-Reader, radio program, 342

Kaufman, Abraham S.

"Tutoring a Visually Handicapped Student in High School Chemistry," 314-7

Kaufman, Martin, 39

Kay, Leslie, 38, 102, 163, 324, 328

Keller, Helen

For Blind Children of the World (film), 165

Memorial Park, Tuscumbia, Alabama, 166

World Crusade, 165

Keller, Helen, International Award, Lord Fraser, 278, 327

Kentucky Volunteers for the Blind, Inc., 37

King, Margaret, 102

King, Paul N., 135

Kinney, Richard, 310

award, 238

Klein, Carol, 102

Knight, John J.

"Building Self-Confidence in the Multiply Handicapped Blind Child," 152-4

Knowles, Paul, 309 (obituary)

Koestler, Frances A., 276

"Five Days at Vinton: The Birth of the American Foundation for the Blind," 241-60

errata, 342

Kohn, Joseph, 134, 329

Kope, Martin G., 135

Kornzweig, Abraham L.

"Progress in the Prevention of Blindness Among the Aged," 209-12

Kuder Preference Record, 85

Kuhn, Judith

"A Comparison of Teachers' Attitudes Toward Blindness and Exposure to Blind Children," 337-40

Kulas Foundation, music notation into braille by computer, 134

Kupfer, Carl, 89

LaCrosse, David M., 39

Lambert, Cornelius, 102

Langford, Robert P., 39

Lantrip, Dewey S., 39

Lastrapes, Blanca, 135

Latimer, Henry Randolph, 243, 249-60

Laustrop, Carlos E., 237 (obituary)

Lawton, Alfred, 31

Learning, aural, 224-9

Leavitt, Glenn

"Time, Money, and Students with Visual Limitations," 271-5

Leber, Edward J., 166

Lee-Thorpe Occupational Interest Inventory, 85

Legislation

"Aid to Families with Dependent Children," 102

for the aging, 51-5

for the aging blind, 215-16

Older Americans Act, 307

Special Services program, 117

"To Promote the Education of the Blind," 90

Leisure time activities program, 342

Lens

plastic, 32

safety, 37

Leonard, J. A., 328

Lewis, Marian and Gary Coker
 "The Use of Abacus Contests to Increase Interest in Mathematics," 41-8
 Library of Congress, 109, 340
 Knight, John, Fund, 310
 library service to the blind, 198, 247
 music notation into braille by computer, 134
 recording studio, 310
 Lieberman, Laurence M., 39
 Lind, Virginia E., 39
 Linvil, J. G. (Optacon), 155
 Listening
 comprehension test (Brown-Carlson), 269
 learning through, 224-9
 research project on, 231
 skills education, 265-70, 275
 teaching manual, 269, 275
 Lighthouse Award for Distinguished Service, 342
 Lighthouse for the Blind, Seattle, 278
 Lions
 Club, 209
 International, 166
 Lobuts, Joseph E., 135
 Lockson, Ruth L., 39
 Lorenze, Edward J., 31
 Loveday, Donald, W., 37
 Lozeau, David W., 39
 Lukoff, Irving F., 328, 329
 Lynch, Francis X., 238
 Lynn, Laurence E., Jr., 278

McConnell, John W., 31
 McCullough, Robert D., 166
 Macdonald, Randal H., 238
 MacFarland, Douglas C., 134
 McGance, Philip, 230
 McGinnis, Frederick P., 342
 McGowan, David L., 33-4
 McGrail, Richard P., 198
 McGuire Lenore L. and C. E. Meyers
 "Early Personality in the Congenitally Blind Child," 137-43
 McGuire, Margaret Anne, 134 (obituary)
 Machemer, Robert, award, 342
 McKain, Walter C., 31
 McKee, Donald E., 35
 McNamara, Martin J., 203
 MacQuarrie Test of Mechanical Aptitude, 81
 Macular degeneration
 low-vision aids, use of in, 206
 research on, 212
 treatment of, 206, 212-3
 visual function in, 206
 Magazines, talking book, 274
 Maine, Downeast Recording Library for the Blind, 37
 Maloney, Elizabeth, 166
 Manaster, Al
 "The Theragnostic Group in a Rehabilitation Center for Visually Handicapped Persons," 261-4
 Mandatory reporting law, New York, 278
 Mann, Robert W., 39, 328
 Manual labor, success in, 86

Martin, John B., 31, 51, 307
 Maryland Association of Workers for the Blind, 250
 Maryland School for the Blind, 250
 Maryland Workshop for the Blind, 278
 Masoodi, Bashir, 310
 Massachusetts Institute of Technology, Audio Response Time-shared System, 219
 Mathematics
 abacus contests, 41-8
 concepts, teaching of, 126-8
 Geadistix Think Sticks, 128
 Isometric Representations Kit, 126
 Maumenee, A. Edward, 342
 May, William D., 134
 Mayer, Louis B., Research to Prevent Blindness, Inc., Scholars Program, 342
 Medicaid, 53
 "Medical Review for the Blind," 37
 Medicare, 53
 for the aging blind, 18-20, 201
 Mentally retarded blind, rehabilitation for, 331
 Mercer, Alonzo V.
 "A Recreational Survey of Blind Persons Who Are 60 Years of Age and Older," 63-7
 Meter light signals into sound, 78
 Metropolitan Society for the Blind
 (See Greater Detroit Society for the Blind)
 Meyer, Garson, 238
 Meyers, C. E., and Lenore L. McGuire
 "Early Personality in the Congenitally Blind Child," 137-43
 Migel, M. C., 255
 Migel Medal, 198, 278, 327
 Migel, Richard H., 327
 Milton, John, Society for the Blind, 309
 Minnesota Clerical Test, 82
 Minatrea, Ellis J., 37
 Minneapolis Society for the Blind, 247
 Minnesota
 Paper Form Board, 81
 Placing Test, 82
 Rate of Manipulations Turning Test, 82
 Vocational Interest Inventory, 85
 Mobility
 backpacking, techniques in, 147-8
 binaural sensors as aid to, 324-6
 and the blind teacher, 5
 cane travel in winter, 8-11
 and junior high school readiness, 14
 and recreation, 292-6
 and security in the young blind child, 76
 and the tactile sense in young blind children, 76
 Money management, personal, 323
 Morford, Eben, 246
 Morrill, Thomas C., 31
 Morrison, Becky and Stanley Briller
 "Teaching Rock and Roll Dancing to Totally Blind Teenagers," 129-31
 Morrison, Elizabeth H., 327
 Mosler, John, 238

Mother, blind, 169-74
 Mountcastle, Vernon Benjamin, Jr., 198
 Multiply handicapped blind child, the, 73-8
 education and habilitation of, 56-61
 education of, in Illinois, 117-9
 radio show by, 152-4
 and reinforcement, 97-9
 self-confidence, building in, 152-4
 school, 237
 Muirhead, Peter R., 309
 Munroe, James P., 247
 Murray, Roger, F., 31
 Music, 295-6
 National Piano Competition, 310
 notation into braille, computer, 134
 recordings, 310
 and the young blind child, 73-8

National Accreditation Council (NAC), 109
 award, 198
 McGuire, Anne, Memorial Fund, 134
 new accreditations, 134, 278
 National Advisory Eye Council, 198
 National Braille Association, 70
 National Center for Deaf-Blind Children, 165
 National Center for Deaf-Blind Youths and Adults, 102
 National Council of State Agencies for the Blind and the aging blind, 55
 National Eye Institute
 reorganization of, 89
 National Federation of the Blind
 and the aging blind, 54
 National Guide Dog Training Centre, Australia, 163
 National Health Council
 agency personnel, courses for, 166
 National Industries for the Blind, 109
 National Institute of General Medical Services, 219
 National Institute of Neurological Diseases and Stroke, 198
 National Rehabilitation Association, Voyle C. Surlock Award, 310
 National Society for the Prevention of Blindness, 90, 209
 Nature study, 293
 Nemeth Code of Braille Mathematics and Scientific Notation, 14
 Neou, I. M., braille verifier for blind typists, 342
 Nesbitt, John A., 135
 Neumann, Frederick T.
 "Demonstrating the Relationship Between Three-Dimensional Figures and Their Two-Dimensional Representations to Blind Students of Mathematics," 126-8
 Newcomer, Waldo, 259
 New Jersey State Commission for the Blind (Atlantic City), 102
 New South Wales
 Royal Blind Society, 102
 Royal, Institute for Deaf and Blind Children, 102

Newsweek Talking Magazine, 88
 New York Association for the Blind, 83
 leisure time activities, adult education in, 342
 piano technology school closing, 37
 New York (City) Public Library, 247
 New York State Commission for the Blind, name change, 278
 New York State Commission for the Visually Handicapped, 278
 New York State Pilot Program on Aging and Blindness, 342
 New York State Urban Teachers Corps, 1
 Nolan, Carson Y. and Joan E. Bott
 "Relationships Between Visual Acuity and Reading Medium for Blind Children—1969," 90-6
 Noyes, Jansen, Jr., 327
 Nyquist, Ewald B.
 "The Importance of Employing Blind Teachers in the Public Schools," 1-6

O'Brien, Paul J., 198
 Occupational interest tests, 85
 (See also name of test)
 Occupations
 computer programmer training, 70
 teacher, public school, 1-6
 understanding of by counselors, 85
 unskilled, testing for, 79-87
 O'Hara, Richard, 37
 Ohio State Rehabilitation Services Commission, 309
 Older Americans Act of 1965, 54
 Olsen, Carl E., 37
 Onufrock, Betty, 135
 Optacon
 reading program at Monroe Public School, 155-62
 Optical aids
 and cataract surgery, 205-6
 for the visually impaired, 335
 Orange Grove Center for the Retarded, Tennessee, 331
 Oregon Commission for the Blind and community recreation, 144-8
 Organization for Social and Technical Innovation (OSTI), 109
 Ortiz, Martin, 202
 Overbrook School for the Blind, abacus instruction, 115
 Owens, James W. ("Jay"), 166

Palmer, Francis E., 241
 Palmer, May (Mrs. Francis), 241
 Parents, blind
 child rearing by, 169-86
 child's evaluation of, 181-6
 Parker, Ann Levine
 "Reinforcement: One Teacher's Experiences with Multiply Handicapped Blind Children," 97-9
 Pascale, Mario A., 39
 Paton, R. Townley, award, 342
 Patterson, Thomas A., 236
 Patton, William E.
 "Research on Criteria for Measuring Mobility Readiness of Adventitiously

Blinded Adults," letter to editor concerning, 33
 Patz, Arnall, award, 102
 Peet, Richard, 135
 Pennsylvania Association for the Blind, 251
 Pen pal club, 37
 Perkins Institution for the Blind, 243
 Perkins School for the Blind
 International Conference of Educators of the Deaf Blind, 165, 198
 Pearson, Sir Arthur, 278
 Phillips, Beth J., 279
 Play equipment for the young blind child, 73-8
 Podolin, Lee J., 39
 President's Committee on Employment of the Handicapped, 134
 Price, Douglas, F., 342
 PROJECT (Banking and the Blind), 323, 340
 Projective Drawings Test, 83, 84
 Psychological development of the congenitally blind child, 137-43
 Psychosocial approach to social casework, 298-306
 Pterygia, 21
 Purdue Pegboard, 82

Radio program.
 Audio Reader, 342
 by multiply handicapped blind children, 152-4
 Raised-Line Drawing Kit in psychological tests, 84
 Randall, Ollie, 203
 Randolph, Jennings, 330
 Reader, George G., 31
 Reading
 material, early source, 247
 mediums for blind children, 90-6
 Optacon program, 155-62
 Recording for the Blind, Inc., 109
 disc recorded textbooks, 37, 135
 Scholastic Achievement Award, 238
 Recording, Educational Tape, for the Blind, 273
 Recording Library for the Blind, Down-east, 37
 Recording of proposed state constitution, Illinois, 38
 Red Cross Institute for the Blind, 248, 254
 Recreation, 291-6
 backpacking, 147-8
 camping, 145-6
 community programs for visually handicapped, 145-8
 dancing, rock and roll, 129-31
 dancing, square and social, 294-5
 survey of the aging blind, 63-7
 Reedy, Corbett, 238
 Rehabilitation
 cooking, teaching of, 149-54
 counselor, in rural area, 21-4
 Criss Cole Center for, 297
 lagging of, 233
 Project Sight Raising, 309
 services, 102

teacher and social worker, 25-30
 teaching concepts and practices, 120-5
 teaching of to adults, 123-4
 theragnostic group in, 261-4
 total life approach in, 331-3
 of veteran, blinded, 287-90
 vocational, of multiply handicapped blind youth, 56-61
 Rehabilitation Services Administration, 106, 109
 Reinforcement and the multiply handicapped blind child, 97-9
 Reprints
 "Child Rearing by Blind Parents," 169
 "New Outlook for the Blind," 99
 Research, macular degeneration, 212
 Research to Prevent Blindness, Inc., Scholars Program, 342
 Residential schools and benefits of accreditation, 220-31
 Residential training program film, 237
 Resnick, Rose
 "Recreation: A Gateway to the Seeing World," 291-6
 Richards, Susan S. and Stanley Briller
 "Learning From Experience: A Revisit to the Children's Corner," 73-8
 Ridenour, Jean, 310
 Rider, Gertrude, T., 247
 Risley, Burt L., 134, 297
 Roberts, Harold G.
 "The Role of a National Voluntary Agency in Meeting the Challenge of the 1970's," 108-11
 Robertson, A. O., 342
 Robrahn, Reese H., 134
 Robinson, Robert L.
 "The Blinded Veteran of the Vietnam War: A Profile," 287-90
 ultrasonic spectacles, 163
 Rolnick, Louis, 39
 Roos, B., 328
 Rorschach Test, 83
 Roth, Evelyn Sue, 39
 Rowing, 293-4
 Royal Blind Society of New South Wales, 102
 Royal Commonwealth Society for the Blind, new address, 134
 Royal Guide Dogs for the Blind Associations of Australia, 102
 Royal Victorian Institute for the Blind, 102
 Rubella
 babies, special development group, 74-5
 classes for children with syndrome, 102
 immunization campaign results, 165
 vaccination, 38
 Rudkin, S. W.
 "Cane Travel in Winter," 8-11
 Rusale, Herbert, 198 (award)
 Russell, Harold, 330
 Rutherford, William, 31

- St. Dunstan's, 278
instructional tapes for the sonic aid, 325
- Salmon, Peter J., 106
- Salmon, Peter J., Award, 37, 102
- Sanborn, Leland C., 236
- Scholl, Geraldine T.
" 'Fringe Benefits' of Accreditation for Residential Schools," 220-3
- Schloss, Irvin P.
"Legislation for the Aging," 51-5
- Schon, Donald A., 328
- Schwab, Lois O. and Mary A. Ware
"The Blind Mother Providing Care for an Infant," 169-74
- Schwartz, Samuel, 310
- "Science and Blindness," AFB seminar, 328
- Science
Curriculum Improvement Study, 190-4
laboratory, teaching of to visually handicapped children, 190-4
teaching materials, 190-4, 313-7
- Scourby, Alexander, 165
- Sculpture and the blind, 61-2
- Sears, Hess T., 31
- Seattle Community Services for the Blind, 73
- Seeing Eye, Inc., 111
Research Chair, 103
ultrasonic spectacles, 38, 163
- Seeing Hand Association Camp, 134
- Semevsky, Nikolai, 198
- Service to the blind, 105-7, 108-11
- Services to the Blind and Visually Handicapped, 107
- Sex Information and Education Council of the U.S. (SIECUS), 318
- Smith-Fess Act, 247, 248
- Smith, Henry, 39
- Smith, Patricia Scherf
"Aging and Blindness: A Public Symposium," 201-3
- Smith, Walter, 166
- Social Security Act, 52-3
- Social Security Administration, braille correspondence with, 198
- Social casework, the psychosocial approach, 298-306
- Social studies, teaching of to blind students, 187-9
- Social worker and rehabilitation teacher, 25-30
- Sony
cassette machine, 271
tape recorder, 271
variable speed adapter for, 271
- Sound-sheets, 135
- South Carolina Commission for the Blind, disc recorded textbooks, 37, 135
- Spar, Harry J., 166
- Sparer, Edward V., 39
- Sports and games for blind children, 292-6
- Speicher, Stephen L., 238 (award)
- Stamps for the Blind, 341
- Stanford-Kohs Block Design Test, 84
- Stanford Research Institute (SRI) Optacon reading program, 155-62
- Stark, Seymour, 238
- Stern, Mildred F.
"Coordination of Casework—Rehabilitation Teaching Services," 25-30
- Stocker, Claudell S.
"Listening Education: From the Kansas Project," 265-70, 275
- Strahs, Martin P., 37
- Strickland, W. Joseph, 102
- Strong, Grace Swift, 102 (obituary)
- Strong Vocational Measures of Interest, 85
- Stromberg Dexterity Test, 82
- Surgery
cataract removal and recovery from, 281-6
- Swanson, Gloria, 330
- Swartz, Frederick C.
"The Challenge of Aging," 217-9
- Sweden, Museum of National Antiquities, 198
- Swedish computer alphabet, 223
- Swift, Sherman C., 243, 257
- Swimming, 293-4
- Switzer, Mary, 106
- Sympathetic ophthalmia, 198
- Tactual historical exhibit, 198
- Talking book machine variable speed adapter, 271
- Tanner, Wilson P.
"Adaptation of Vision Following Cataract Removal," 281-6
- Teacher
attitudes toward blindness, 337-40
blind, in public schools, 1-6
of multiply-handicapped blind children, 97-9
of the visually handicapped, graduate training, 37
- Teaching
of cooking, 149-54
chemistry to visually handicapped students, 313-7
- Credo, 107
geography to blind students, 187-9
laboratory science to visually handicapped children, 190-4
mathematics, problems in, 41
rehabilitation concepts and practices, 120-5
rehabilitation to adults, 123-4
social studies to blind students, 187-9
- Team approach, rehabilitation, 25-30
- Telephone Reassurance Program, 166
- Tests, 337
motor abilities, 82
psychological, 83-84
psychological for vocational potential of visually handicapped, 79-87
(See also name of test)
- Tennessee School for the Blind, 41
abacus instruction, 112-3
- Tennessee State Services for the Blind, rehabilitation for the mentally retarded blind, 331-3
- Texas Commission for the Blind, 297
- Thematic Apperception Test, 83
- Theragnostic group for the visually handicapped, 261-4
- Therapy, group, 261-4
- Thier, Herbert D.
"Laboratory Science for Visually Handicapped Elementary School Children," 190-4
- Thom, Francis, 39
- Thornton, Walter
"The Binaural Sensor as a Mobility Aid," 324-6
- Thurstone Interest Schedule, 85
- Titman, Gisela M., 102
- Todd, Webster B., 278
- Training center, grant for, 309
- Travel Information Center for handicapped travelers, 237
- Turner, Ada, 247
- Tuttle, Dean and Gil Johnson
"Education and Habilitation of Multiply Handicapped Blind Youth," 56-61
- Twine, John D., 102
- Typhlography, in Russia, 198
- Typists,
braille verifier, 342
visually handicapped, error corrections, 341
- Ultrasonic spectacles, 38, 102, 163, 324-6
training in use of, 70, 163
- Uniform Type, Commission on, 245
- University of Northern Colorado, 37
- Urdane, William M., 279
- Uveitis, 89
- Van Cleve, Edward M., 243
- Velli, Carmel, 309
- Veterans, blinded, 248
case history, 303
commissary card privileges, 237
Vietnam war: a profile, 287-90
- Veterans Administration
hospital admission, 70
and the Vietnam blinded, 289-90
- Vietnam War
veteran, blinded of, a profile, 287-90
- Vinton, Iowa, birthplace of AFB, 241-60
- Virginia School for the Deaf and Blind, 246
- Virginia Legislative Commission for the Blind, 246
- Vision
Index, 309
screening of the aging, 213-5
- Visual
acuity and reading medium, relationships between, 90-6
categories, 91
impairment and blindness, 334-6
prosthesis, 198
Science Information Center, 309
- Visually handicapped, the
backpacking for, 147
camping for, 145-8
ID cards for, 309
parent, child's evaluation of, 181-6
recreation for, community, 144-8
testing vocational potential of, 79-87
typists, error corrections, 341

Vocational
 interest scale in braille, 20
 potential of visually handicapped, testing of, 79-87
 Vocational rehabilitation
 Barten-LaFollette amendments, 248
 multiply handicapped blind youth, 56-61
 Smith-Fess Act of 1921, 247, 248
 Vocational Rehabilitation Act, 107
 and aging blind, 55
 Volunteers
 for the Blind, Kentucky, 37
 with children, young blind, 77
 Retired Senior Volunteer Program (RSVP), 307
 Senior AIDES, 203
 Serve and Enrich Retirement by Volunteer Experience (SERVE), 342

Ward, Robert C., 310
 Wallace, L. W., 253
 Ware, Mary A. and Lois O. Schwab
 "The Blind Mother Providing Care for an Infant," 169-73
 Wares, Donald, 39

Waterhouse, Edward J., 165
 Watkin, Donald M., 31
 Watkins, Robert E., 134
 Watts, L. L., "Colonel," 246
 Welfare agencies, state, 54
 Welfare services and inflation, 342
 Weihl, Carolyn
 "The Optacon Reading Program at the Monroe Public School," 155-62
 Weiss, Walter, 328
 Werner, Craig, 238 (award)
 Westchester Lighthouse for the Blind, 166
 Weschsler-Bellevue Scale, 80-1, 84
 Werntz, George, 111
 Wheeler, Jane G.
 "Teaching the Concept of the Diagonal During Handwriting Lessons for the Congenitally Blind," letter to editor concerning, 31
 Wheeler, Kenneth R., 342
 White House Conference on Aging, 31-2
 Wiesner, Jerome B., 197, 276, 328
 Migel Medal, 327
 Wiggins, Belle Buchman, 238
 Wills, Garry
 "Teaching Us to See," 61-2

Wilson, Edouard L.
 "The Use of Psychological Tests in Diagnosing the Vocational Potential of Visually Handicapped Persons Who Enter Supportive and Unskilled Occupations," 79-87
 Wilson, Woodrow, 247
 Winkley, William M.
 "The Geographically Deprived," 21-4
 Winton, Chester, 328
 Wolf, Benjamin, 309
 "Visual Impairment Is Not Blindness," 334-6
 Wong, Vernon G., 89, 198
 Woodard, Susan Lynn, 238 (award)
 Woody, Allen, 238
 Wooley, J. M., 330
 Workers for the blind, 105-7, 108-11
 and the aging blind, 202
 numbers of, 110
 Wyman, George K., 31, 39, 102

Yoder, Norman, 244
 Young, Charles R., 39

Zabel, Ellen, 135

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